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A STUDY OF PEPTIC ULCER

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The problem of peptic ulcer has engaged a good deal of attention in recent years because of its high incidence; it has been stated that 10% of all adult males suffer at some time from a peptic ulcer. The disability produced is considerable and accounts for much absenteeism in industry. The degree of disability is evidenced by the willingness with which the majority of patients have come into hospital for a lengthy period of treatment despite the associated financial difficulties.

Many theories have been put forward as to the causation of peptic ulcer, but the occurrence of this condition in man has not been satisfactorily explained. Two theories, however, are attractive: the first that peptic ulcer is due to nutritional deficiency, and the second that psychogenic factors are largely responsible for the disease.

McCarrison (1936) found that the incidence of peptic ulcer was 58 times as great in Southern India as compared with Northern India, corresponding to a very inferior dietary in the former. This was borne out by his experiments with rats fed on the native diets. Other animal experiments, such as those of Slive, Bachrach, and Fogelson (1940), using a modification of the Mann Williamson operation, suggest that a nutritional cause is important. But the degree of undernutrition in Southern India (and in the animal experiments) is not matched in the ulcer population as seen in this country, and, though in our observations it was practically impossible to assess the actual diet of the patients before the occurrence of ulceration, we could not obtain any evidence of gross deficiency.

Psychological Factors in Causation

On the other hand, the play of psychogenic factors alone has seemed unlikely to effect the initial occurrence of peptic ulcer, but nevertheless the role of such factors in the continuance of the condition and in relapses cannot be ignored. General clinical experience provides contradictory evidence: many patients with chronic recurring ulcers appear to be psychologically normal and to suffer no undue stress in their personal, financial, or industrial relations, but yet occasionally the occurrence of emotional reaction is sharply associated with breakdown. One patient, a plumber aged 50, has had five large haemorrhages, each one preceded by a period of great stress. He admitted it was "all his nerves," and he realized that he had an excessive emotional reaction to his difficulties. His sense of justice had led to overwhelming mental upset when he had troubles with his foreman, and he had on other occasions been equally disturbed by financial difficulties and when serious illness overtook his favourite son; in fact he foresaw the actual incidence of his last two haemorrhages. In his reaction to injustice he reminded one of Tom, the subject of Wolff and Wolf's (1943) researches. Tom could show similar emotional reactions, and when upset in this way there were both increase of the vascularity of his stomach mucous membrane and increase of acid secretion. Herein lies a possible mechanism whereby emotional disturbance could cause exacerbation or relapse in peptic ulcer, given the individual tendency to produce such ulcers. It will be shown from our figures that treatment, though generally effective in healing a peptic ulcer, is followed in a large proportion of cases by rapid relapse in the class of patients observed. While in a few cases relapse is due to lack of co-operation and neglect of instructions given, or to difficulties in carrying them out in particular circumstances, such failure was not evident in the majority. If psychogenic factors are important, then clearly one could hardly expect good results if adequate social and psychological adjustments are not made. In individual cases this is sometimes very obvious, as, for example, in a middle-aged woman with a gastric ulcer who had relapsed twice and in whom a partial gastrectomy was recommended; however, while awaiting admission the ulcer healed rapidly, and in this period she had achieved both personal happiness and a freedom from financial worries which had beset her in her business throughout the war. Further, a young woman with a gastric ulcer near the cardia, which did not heal after two prolonged periods of treatment, achieved rapid healing after she married—though it must be reported that her husband promptly suffered a relapse of his duodenal ulcer.

Other authors have drawn attention to the importance of psychological factors in causing the onset of pain, perforation, or haemorrhage in cases of peptic ulcer. Thus Draper (1942) says that he has frequently observed the onset of these symptoms 1 to 10 days after severe financial loss, a business reverse, a sexual slip, a violent argument, or some personal frustration, adding, however, that very often such episodes were not followed by symptoms. Robinson (1937) attaches great importance to the bodily and mental constitution of ulcer patients, and concludes that "emotional conflict in an individual with ulcer diathesis is alone essential for the production of chronic gastric ulcer." Robinson (1938) believes that the mode of operation of these emotions is through the parasympathetic nervous system. This view is also supported by Necheles (1937), who associates gastro-duodenal hyperaemia with the liberation of acetylcholine by parasympathetic action. In his view "most ulcer patients are persons of the worrying, highly strung type." Further evidence is provided by Davies and Wilson (1937), who examined 205 ulcer patients and 100 cases of hernia, and found a very much higher incidence of psychogenic factors immediately preceding the onset of symptoms in the former than in the latter. Most of these took the form of a change of work, financial difficulties, or illness or misfortune in the family. Wilson (1939) comes to the conclusion that "in recurrent haematemesis and gastro-jejunal ulceration there is reason to believe that psychological treatment certainly offers at least as much hope of saving life as other therapeutic approaches, and, since it is probably directed to the basic disturbance, it may possibly prove more successful in the end." Epidemiological evidence tends to support these views to some degree.

Morris and Titmuss (1944) found a rise in the mortality from peptic ulcer in wartime, which reached its height in the last quarter of 1940, when air raids were severe. Illingworth, Scott, and Jamieson (1944) observed a similar rise in the incidence of perforation at the same time; they do not attribute it to air-raid stress but to the general effects of anxiety and overwork.

The Present Investigation

The original purpose of this investigation was the determination of the part played by psychogenic factors in patients with peptic ulcers. The formation at the Atkinson Morley Emergency Hospital of a small in-patient unit for the treatment of such cases gave us this opportunity. All patients admitted to this unit between February, 1943, and June, 1944, were interviewed (by E. S.). Among them were the present group of ulcer patients, frequently first diagnosed after the psychiatric interview. The patients were then followed up at St. George's Hospital, and it was thereby possible to estimate the results of treatment.

Patients were examined radiologically in the first instance, either at St. George's Hospital or as soon as possible after admission. They were treated, resting in bed, by dietetic methods similar to those used by Hurst; and were maintained on a diet of two-hourly varied feeds with the addition of ascorbic acid, and of sufficient calorie value, so that in fact the great majority of patients steadily gained weight during treatment. Suitable occupational therapy was provided. Healing was observed by repeated opaque-meal examinations at four-weekly intervals, and confirmed in some cases by gastroscopy, and only rarely were the *x*-ray and gastroscopic findings discordant. The average stay in hospital was 9 weeks. While in hospital the patient's home and working conditions were investigated and discussed with the almoner, and wherever possible advice was given as to necessary readjustments, and contact made with employers, disablement rehabilitation officers, and industrial medical officers. The social difficulties were very much in evidence; most of the patients were men engaged in industrial occupations, many on shift work; travelling time to and from work was considerable; canteen facilities left much to be desired, and wartime restriction of food rendered dieting at home difficult. In addition there was much anxiety because of bombing.

The patients were diagnosed as D.U. or G.U. if radiologically proved or if perforation had occurred, or else as clinical D.U. (C.D.U.) where the symptoms and history suggested this diagnosis, subject to confirmation either by a history of haemorrhage or by a satisfactory reaction to dietetic treatment. No diagnoses of clinical G.U. were made, and it was considered that G.U. was less likely to be missed radiologically; but in view of the analyses of symptoms it is possible that the C.D.U. group contained a few cases of gastric ulcer. Anastomotic and juxtapyloric ulcers are treated in the discussion as duodenal ulcers, but the former are omitted in the calculation of the relapse rate. Of 72 men radiologically proved to have duodenal ulcer, 7 also presented at the same time a gastric ulcer; and of 33 cases of men with gastric ulcer, 3 had also a duodenal ulcer.

Symptomatology.—Differences in symptomatology were not marked between the D.U. and the G.U. cases. It is usually held that pain in G.U. occurs immediately or soon after a meal, whereas in D.U. it occurs much later. In our series 73% of the male D.U. patients experienced pain more than an hour after food, and all the females had late pain. The remaining D.U. patients had pain that was either early or continuous. In G.U. 82% of male and 75% of female patients had pain occurring late—i.e., over an hour after a meal. Nocturnal pain, also thought to be more characteristic of D.U., was found in 75% of male D.U. patients but also in 30% of male G.U. patients. Test-meal estimations by the alcohol method were done on a number of patients. In 75% of male D.U. patients a figure of HCl greater than 60 ml. N/10 NaOH was reached, whereas in only 30% of male G.U. patients was this figure exceeded. It seems clear that, although peptic ulcer could be diagnosed clinically with a reasonable degree of certainty, there is still a considerable margin of error.

Mode of Psychiatric Inquiry.—All these patients were given a routine psychiatric investigation (by E. S.). At the time of this investigation it was not known what the final organic diagnosis would be. Standard questions of the type usual in psychiatric consultations were employed, relating to family history, childhood, school and work record, dominant personality traits, marriage and sex life, private worries, and neurotic symptoms. Psychiatric diagnoses were made where possible. Where there were indications for some psychiatric measure of treatment a corresponding suggestion was made. This proved necessary only in three cases. In the whole group of 130 males and 32 females a psychiatric diagnosis was made on 19 males and 6 females, as follows: chronic anxiety neurosis—mild, 5 males, 3 females; fairly severe, 2, 1; mild recent anxiety neurosis, 2, 0; mild hysterical reaction, 2, 0; chronic mild obsessional neurosis, 1, 0; minor mental defect with instability, 2, 1; psychopaths—hysterical, 0, 1; paranoid, 1, 0; with ? latent homosexuality, 1, 0; chronic alcoholic, 1, 0; inadequate, 1, 0; compulsive adventurer, 1, 0. At first glance, therefore, we find approximately 15% of psychiatric abnormality, which is not greatly in excess of the 10% which some authorities believe to be the incidence in the general population.

Results

Diagnosis and Sex Incidence.—In the D.U. group there were 72 males and 12 females; in the C.D.U. group, 25 and 8; in the G.U. group, 33 and 12. In this series, therefore, 72% of the ulcers are duodenal and 80% of the patients are male. Although G.U. is relatively rather more common among the women, the difference is not significant. This distribution of the two types of ulcer between the sexes seems to be in accordance with the findings of others. In the mortality figures for England and Wales given by Tidy (1944), however, G.U. outnumbers D.U. for both sexes, and the proportion of males to females is nearer 2 : 1 than 4 : 1 as here. Discussing the statistics of St. Thomas's Hospital, Tidy (1945) is inclined to doubt whether the preponderance of duodenal ulcer seen in private practice reflects the state of affairs in the country at large; and under sex incidence he gives for G.U. at all ages 2.6 males to 1 female, and for D.U. 8.4 : 1. On the other hand, in the 952 patients reported by Jones and Pollak (1945) from the Central Middlesex Hospital the ratio of D.U. to G.U. was 2.3 : 1; and of males to females it was for G.U. 2.4 : 1, for D.U. 6.9 : 1. With these findings our ratios, within the limits of error of a small sample, are in substantial agreement.

The relative immunity of the female to peptic ulceration is a point of outstanding interest. Highly suggestive material has been published by Sandweiss *et al.* (1939). In one collection of 70,000 consecutive pregnant women only one active ulcer was found; in another group of 13,780 pregnant women there was no case of ulcer, although there were, for instance, 98 cases of appendicitis and 27 of cholecystitis. Among their collection of ulcer patients, 25 women underwent 52 pregnancies, but only one of them suffered from dyspeptic symptoms during the pregnancy. Collecting published reports of peptic ulcer in children, they found 52 males and 49 females—i.e., there was no comparative immunity of the female at this time of life. They also state that there is a high proportion of endocrine dyscrasias among women with peptic ulcer. The same authors report good results of treatment of ulcer with antuitrin "S."

As will appear from the table of psychiatric findings, our female patients formed a much more neurotic and emotionally unstable group than the males. This seems to suggest that as regards liability to ulcer a woman must have a constitution altogether inferior to that of a man, and therefore in her case there is some protection afforded by biological and constitutional factors.

Age Distribution.—Taking all patients together, the mean ages (in years) for the males were: All D.U., 39.20 (D.U., 38.97; C.D.U., 39.84); G.U., 46.76. For the females they were: All D.U., 36.25; G.U., 52.75. The standard deviations were (for males): All D.U., 9.86; G.U., 9.50. The distribution of patients according to age was as follows:

Age	No.	Age	No.
Under 20	0	50–54	18
20–24	8	55–59	10
25–29	10	60–64	2
30–34	33	65–69	6
35–39	26	70–74	1
40–44	30	Over 75	1
45–49	17		

From the age distribution it is possible to make a rough estimate of the proportion of the total liability to peptic ulcer which has been survived by a given age, as follows:

Age	Percentage Danger Past	Age	Percentage Danger Past
Under 20	0	50–54	82
20–24	3	55–59	91
25–29	8	60–64	94
30–34	22	65–69	97
35–39	40	70–74	99
40–44	57	Over 75	100
45–49	72		

These figures are of interest in themselves, and are also published because they were used to calculate the incidence of gastric disease in the first-degree relatives of these patients. Although the numbers are very small on which to base such an actuarial calculation, the much larger material published by Avery Jones yields almost exactly the same figures, as the age distribution in his cases and that in ours were very much the same. Our figures show no significant differences in the mean ages of the various groups (despite the big difference between male and female G.U. groups); but the G.U. patients as a whole are significantly older than the D.U. ones.

Marital State.—Of the male patients 12 were single, 115 married, and 3 widowed; of the female, 17 were single, 10 married, and 5 widowed. The deficiency of married women is very striking and is much too great to be possibly accounted for by chance ($P<0.001$). This finding clearly fits in very well with the observations of Sandwejss *et al.*, which have been referred to above.

Income Level and Financial Stress.—Considerable importance was attached by Davies and Wilson to financial stress as a cause of peptic ulcer. Precise data on income were collected from 110 male patients in the course of psychiatric history taking. There were no significant differences between the clinical groups, and the mean weekly wage was £5 6s. 9d., with a standard deviation of 37s. One in six of the patients was therefore earning less than £3 9s., which is low. Inquiries on financial stress were made by the almoner, Miss Montgomery, from 87 patients. They were classified into those in whom there was no stress, those in whom there might have been some stress, and those in whom there was obvious stress. No significant differences were found between the diagnostic groups, but stress was significantly more frequent among the women ($P<0.02$); of those recorded three-quarters had doubtful or certain financial stress, whereas this was true of only one-third of the men.

Family History of Gastro-duodenal Disorder.—In all patients a careful account was taken of ages of parents and sibs and any history of gastric or duodenal disease or indigestion. In many instances the patient was able to report that the relative had had "gastric" disease, for which there had perhaps been several admissions to hospital, with or without operation, and which in some cases had ended in perforation or death; but he might still be unable to say whether the cause was a gastric or a duodenal ulcer. These cases were distinguished from those in which there had been a history of indigestion, however prolonged, where the symptoms might have been due to a functional dyspepsia. The former were diagnosed as "gastric disease" and the latter as "indigestion." If to every relative we assign a weight corresponding to the proportion of the risk of peptic ulceration he has outlived, it could be calculated from our data that we had observed the life spans of 126.5 fathers, 134.0 mothers, 127.7 brothers, and 148.7 sisters. The incidence of gastric disease could then be calculated as: in the fathers 9.5%, in the mothers 3.7%, in the brothers 6.3%, and in the sisters 1.3%. It is sometimes suggested that at the present time one out of every ten men can be expected to develop a peptic ulcer in the course of his life; but it is equally agreed that the proportion would not have been nearly so high a generation ago. The incidence of 9.5% gastric disease in the fathers of our patients, then, suggests the existence of a hereditary constitutional factor. It is fair to add that the incidence in the sibs is not so suggestive.

"Gastric disease" shows the same relatively higher incidence in the male sex in the relatives of our patients as in the patients themselves. It is otherwise with indigestion, which the patients frequently referred to as "gastric trouble," in respect of which there were slightly more female relatives affected than males. Of our 130 male patients 20 had a family history of gastric disease, 19 of indigestion; of the 32 female patients the numbers were 4 and 11. This difference between the sexes is significant ($P<0.02$). It is probably to be associated with the fact that the females as a group are more neurotic than the males, as will appear later.

Psychiatric Findings

These are given in the accompanying Table. At no point was any significant difference discovered between the male D.U. and C.D.U. groups; these were therefore treated together. At a few points there were significant differences between the groups D.U. and G.U., which will be mentioned as they arise. In all other points the only comparison made will be that between males and females. All differences were tested by χ^2 on the actual numbers observed: where a significant difference between the sexes was found it is indicated by italic type in the Table.

Percentage Incidence of Psychiatric Findings

	Males	Females
Family history of:		
Minor neurosis	19	28
Nervous breakdown, suicide	5	12
Childhood history:		
Minor nervous traits	*11*	*34*
Definite neurosis	*3*	*10*
Indigestion	5	16
School career:		
Lower than top standard	22	19
Average elementary	59	47
Higher education	19	34
Occupation:		
Unskilled	35	
Semi-skilled	28	
Skilled	19	
Clerical and other	18	
Work record:		
Poor	3	
Average	82	
Good	18	
Sex life:		
Undersexed	23	
Past history:		
Nervous symptoms	*16*	*28*
„ breakdown	*8*	22
Personality traits:		
More energetic than average	42	41
Less „ „	5	24
Mood over-reactive	*18*	*41*
„ spontaneous swings	8	12
„ predominantly depressive	5	12
„ „ anxious	*34*	*69*
Inclined to irritability	20	19
„ hypochondriasis	38	32
„ obsessionality	15	25
„ hysteria	*3*	*25*
Schizoid and asocial traits	5	0
Bodily habitus:		
Asthenic	32	
Athletic	58	
Pyknic	11	
Intelligence rated as:		
Poor	5	16
Average	73	47
Superior	22	37
Neurotic symptoms shown:		
Anxiety	16	22
Hypochondriasis	32	28
Psychogenesis found	*8*	*37*

Family History.—The incidence of a psychiatrically "positive" family history in all patients together is 25%. This is a much smaller figure than that obtained from neurotic patients, where it is invariably reported as over 50%; and it may be no more than that which would be obtained from a random sample of the population.

Childhood Neurosis.—A history of neurotic traits or of definite neurosis in childhood is much more frequent in the women than in the men ($P<0.001$); in the men it is not likely to be more frequent than in the general population.

School Career; Intelligence.—The school careers of our patients are probably better than the average; and a purely clinical judgment on examination suggested that they were on the whole of rather superior intelligence. Draper (1942) says that a large majority of ulcer patients have good to superior intellects. Robinson (1937) considers that they are alert and intelligent, but memory and mathematical ability are poor. Factual data in support of these opinions are not given by either author. In point of school record, a significant difference ($P<0.05$) was found between the D.U. and the G.U. patients, the latter doing less well on the whole.

Occupation and Work Record.—The occupations and work records of the females are not discussed, as they clearly could not be compared with the men. It seems probable that our patients would compare well with the average in occupational level. As reported by Slater (1943), the previous occupations of 2,000 neurotic soldiers were 33% unskilled, 38% semi-skilled, and 10% skilled. In this peptic ulcer group there were fewer in the semi-skilled and nearly twice as many in the skilled occupations. However, the population from which we drew our patients may not correspond with the background of the neurotic soldiers. Work records were classified as poor in those who had had much unemployment or had come down in life from the standards upheld by their parents, good in those who had advanced themselves. There can be no doubt that on the whole our patients were good workers and almost certainly superior to a general average.

Sex Life.—Of the male D.U. patients 27 had led a somewhat undersexed existence; of the G.U. patients, only 3. The difference is significant ($P<0.05$). Without comparable material from the general population the patients as a whole cannot be regarded as abnormal in this respect. Sex problems and any source of worry in the sex life were found in only one of all the male patients. These findings entirely fail to confirm the contentions of Draper (Draper and Touraine, 1932; Draper, 1942), who believes that, morphologically, male peptic-ulcer patients show a feminine component; he says he has found an "inner sense of insecurity based on actual or supposed physical inferiority, including gynic emphasis," in 84% of them, and stresses worry over a sexual slip as a cause of symptoms. Robinson (1938), on the other hand, regards peptic ulcer patients as being rather more active sexually than the average and "strongly heterosexual."

Past Nervous Symptoms.—Inquiry was made about symptoms of a neurotic kind having been experienced in the past, and about a history of "nervous breakdown"—i.e., a non-organic illness with nervous symptoms involving absence from work of several weeks. Such a history was obtained with highly significant greater frequency from the females ($P<0.001$). Taking the males alone, the figures cannot be regarded as unduly high.

Personality.—Personality traits are listed under a number of heads. It will be noted that an over-reactive mood and tendencies to anxiety and to a hysterical type of reaction are much more frequent in the females than in the males ($P<0.01$–0.001). But the preponderant characteristics of the group as a whole, comparing them to what is met with elsewhere in psychiatry, are energetic disposition, and tendencies to anxiety, irritability, obsessionality, and hypochondriasis. These traits fit in with a well-known psychiatric temperament type, the so-called "obsessional." These findings are in substantial agreement with those of other authors. Draper (1942) states that ulcer patients are conscientious to the extreme, high-principled, and ambitious. Robinson (1937) says they are active, driving, alert, intelligent, restless but easily fatigued, and their activity is ill sustained. The patient is not neurotic in any narrow sense; he is not hypochondriacal or given to complaining, nor is he either an anxiety or a compulsion neurotic. Emotional conflict rages within, protected from the outsider's gaze. There is a strong tendency to worry, and there are no safety-valves for pent-up emotion. Davies and Wilson (1937) describe the ulcer patient as showing more than usual tension; a worker, with an urgent, anxious compulsive quality, a tendency to worry, having an interest in activity and efficiency, liable to develop symptoms with any threat to his security.

From this evidence we believe that the "obsessional" type of personality must be regarded as rather more than normally susceptible to ulcer. But it must not be concluded that all ulcer patients are of this type. The obsessional type of personality is not extremely common, and the majority of ulcer patients do not conform to it.

Bodily Habitus.—In our material the diagnosis of type of bodily habitus was made, only in the males, solely on a visual impression, so cannot be allowed much weight. The impression was gained, however, that on the whole the patients tended to be of the asthenic type. This is in conformity with the findings of Robinson and Brucer (1940), who found that ulcer patients had significant deficiencies in body weight, chest and abdominal circumference, compared with candidates for life assurance. These differences might, however, be caused by variations in degree of nutrition. In our series the patients at the time of admission to hospital were considerably under their best weight in times of health; the mean loss was for the men 15 lb. (6.8 kg.) and for the women 11 lb. (5 kg.). A general tendency among ulcer patients towards the asthenic or linear type of build is, however, also shown in the skeletal measurements taken by Feigenbaum and Howat (1935), though these authors are themselves sceptical of the interest of their findings.

Neurotic Symptoms.—Obvious neurotic features were not commonly found on examination in our series. A neurotic reaction to the illness was adjudged to be present in 13 patients—9 male and 4 female—and in 41 males and 9 females there was a good deal of hypochondriacal preoccupation. An exploration of psychogenic precipitating factors was conducted on a superficial level, and patients were asked to what external cause they attributed the onset of their symptoms. Most of them could give no reason, but 18 of the men suggested irregular meals, generally due to conditions of work, 9 worry over home and other affairs, 8 having to work in "fumes." The circumstances of their lives were discussed in some detail, and it was eventually concluded that psychogenic causes of worry were present in 10 males and 12 females. The relatively greater incidence in the females is highly significant ($P<0.001$).

Results of Treatment

For the majority of patients the method of treatment appeared to be satisfactory. Steady healing was observed, and a stay in hospital of from 6 to 16 weeks was required before healing was deemed to be complete. In a few cases treatment failed, and, following this, partial gastrectomy was done in 6 men for D.U., 4 men for G.U., and 2 gastro-enterostomies were done for pyloric stenosis. A few patients left hospital with unhealed ulcers, which healed later. In calculating the relapse rate, only those cases were included in which the follow-up was satisfactory, and patients were omitted whose stay in hospital had been curtailed for various reasons and who relapsed so quickly that it was reasonably certain that complete healing had not occurred. The following figures were obtained:

Type of Ulcer	Sex	No. of Patients	No. of Patients who Relapsed within		
			6 months	12 months	18 months
D.U.	M	48	15 (31%)	24 (53%)	29 (59%)
	F	10	2 (20%)	4 (40%)	5 (50%)
G.U.	M	26	13 (50%)	15 (58%)	16 (62%)
	F	9	4 (44%)	6 (67%)	6 (67%)

Roughly speaking, well over half the patients had relapsed within a year of discharge from hospital. The numbers of the women are too small for statistical handling, but those of the males can be dealt with as in a life table, and on the numbers observed during any given month and the number who relapsed in that month a survival rate for that month can be calculated. Probabilities of survival can then be progressively multiplied. Dealt with in this way, the chance of surviving without relapse for 3 months after discharge from hospital is 73%, 6 months 62%, 9 months 55%, 12 months 42%, and 18 months 33%. The greatest risk of relapse occurs in the earlier months; one-third of the patients can be expected to relapse within 4 months.

Clinical data were searched for indications of possible causes of the high relapse rate. Dividing the patients into two groups—those who recovered and remained well and those who failed to recover or relapsed—and noting the relative frequency of various clinical findings in these two groups disclosed no significant differences, with one exception. This was true of such medical findings as number of weeks of treatment, timing of pain, relief of pain, occurrence of pain at night, drinking habits, test-meal results, as also of all the psychiatric data. It is of particular interest that none of the psychiatric findings, not even the various indications of anxiety tendencies, had any prognostic meaning. The only item that was significantly associated with relapse rate was smoking. Of the 40 heavy smokers observed 22 recovered and did not relapse; of the 50 men known to be only moderate smokers or non-smokers, only

12 did as well. This is a difference between 55% and 24% and is significant ($P<0.01$). It can, we think, be understood if it is assumed that heavy smoking is likely to aid in the production of peptic ulcer. Men who smoke heavily then subject their stomachs and duodenums to a special stress, and once this is removed (on the advice of the physician) stand a better chance than those who broke down without it.

Discussion

The largely negative results of the psychiatric investigation have to be compared with the findings and the beliefs of other authors. Draper (1942) attributes great importance to the physical reaction to the fear stimulus. Ulcers reflect a disturbance in the inner rather than the outer world, and the fear and guilt associated with sex are very important. Draper recommends that the ulcer patient should receive plentiful help from the psychiatrist. For that author, in fact, the ulcer patient is a neurotic patient. Fundamentally the same attitude is taken by Wilson. Davies and Wilson (1937) showed that there was an unduly high incidence of minor upsetting events, like change of job, etc., in the few days immediately preceding the onset of symptoms. According to Wilson (1939), the illness of the ulcer patient is precipitated by anxiety, and recovery depends on the underlying anxious state. Robinson (1937), on the other hand, protests against the tendency to regard the ulcer patient as neurotic, but he lays special stress on the importance of everyday worries as a cause of ulcer. Our findings are not in conflict with those either of Davies and Wilson or of Robinson. The psychiatrist received no impression that our patients as a whole were being subjected to anything out of the way in psychological causes of worry, nor that such stress as they did have to meet was dealt with in the patient's mind in an inefficient or neurotic way. It is true that in the course of the stay in hospital or during follow-up treatment individual patients sometimes revealed serious causes of worry about which they had been silent up to that point, even during the psychiatric interview. Psychiatric impressions formed during a single interview are therefore likely to provide an underestimate of the incidence of substantial sources of anxiety. The interpretation favoured by us is that the familiar stresses of everyday life were having a more than normally large effect on the vegetative nervous systems of constitutionally susceptible people. This seems to be the interpretation favoured by Robinson but not by Draper. From it we would not conclude, as Wilson does, that the preferred line of treatment is psychiatric, nor would we say that it is at all necessary that a psychiatrist should be called in to deal with more than a small proportion of these cases. No process of psychological re-education is likely to stop these men over-reacting in the autonomic field, and the ulcer diathesis cannot be easily alterable. On the other hand, it is clearly desirable that attention should be paid to sources of worry in the patient's life, and anything that is possible be done to correct them. In the great majority all that is feasible can be done by the physician or surgeon. If he can take some human interest in his patients, not only as stomachs and duodenums but also as individuals, and in their home affairs and personal problems, no more psychiatric expertness than the dictates of common sense will usually be necessary.

On the constitutional side, attention must be drawn to the pronounced differences between the male and the female patients. Two-thirds of the women (21/32) were considered to show a noteworthy deviation of personality from what is, from experience, regarded as the normal range; of the men, only one-quarter (34/130). Frequencies of family history of indigestion, of neurotic traits in childhood, of past nervous symptoms, of tendencies to over-reactivity of mood, to anxiety and hysteria, were all significantly more frequent in the females. We do not believe that this can be explained by a biased selection in gathering the material. It seems most probable to us that, compared with men, women are relatively protected by their constitution or by their mode of life against the development of peptic ulcer, and that therefore a greater degree of somatic instability is required for its development—an instability that shows itself in other visceral and psychosomatic fields. This hypothesis is in accord with the findings of Sandweiss *et al.* (1939). It is quite possible, as they suggest, that this line of thought will indicate a method of treatment directed towards the underlying diathesis.

The results of treatment were disappointingly poor, and this may in part be attributed to the stress of wartime conditions—difficulties in feeding, long hours of work, bombing, etc.; but on the basis of previous experience it is doubtful whether these adverse conditions played more than a relatively small part in the results. The efficiency of the treatment as given seems hardly open to question as a method of healing peptic ulcers, because in the majority of cases recovery was achieved even under the conditions existing at the time. In any case, the time of treatment was such that few patients could tolerate an extension. The failure is in the prevention of relapses. The discharged patient probably carried out fairly well his instruction as regards diet and taking antacids, but the readjustment of the patient's work conditions and of his attitude to his social problems could only rarely be dealt with satisfactorily. For many reasons it was difficult to effect a change of occupation, even though the absence of unemployment during the war should have facilitated such changes. Where an individual was highly trained he was often unwilling to try a change of occupation, despite his awareness of the unsuitability of the conditions of work in his present employment. In some cases this was due to the risk of a lower level of earnings. Employers, too, could not always find other work for individuals for whom shift work produced obvious difficulties. On the other hand, a few patients did accept retraining under the Interim Scheme, and the resettlement appeared to be satisfactory. For example, the retraining, say, of a bus driver and his resettlement in a new job with better feeding conditions and no spread-over in hours of work seemed effective. In other cases resettlement in a new job with less responsibility and worry proved helpful. It appears from such cases that all the facilities of the Disabled Persons Act should be used to the full in the treatment.

In the group of women with G.U. it was obvious that the social stresses were of a different order. They were elderly, with an average age of 53, and their home and living conditions could not easily be changed. It has been noted above that in the group of women with peptic ulcer there was a marked scarcity of married women, and it is possible that for women living alone the management of nutritional requirements left much to be desired and the standards of family life were not reached.

The incidence of the disease is so high that the problem of providing hospital in-patient treatment is enormous, and many patients with a disabling degree of pain have difficulty in obtaining admission to hospital. At present the only alternative to medical treatment, including attention to the factors just discussed, would be the greater use of surgical methods. However, even if facilities were available it seems hardly justifiable to apply such a major surgical procedure as partial gastrectomy to more than a relatively small proportion of the cases.

Summary

A group of 130 men and 32 women with peptic ulcers, in addition to the usual clinical investigations, were also investigated psychiatrically and followed up after treatment for periods up to three years.

The ratio of D.U. : G.U. was 2.6 : 1, and the ratio of men to women was for D.U. 6 : 1 and for G.U. 2.75 : 1. This corresponds with the findings of other observers. In our series there was a very small proportion of married women.

The analysis of the family incidence of gastric disease and indigestion suggests the existence of a hereditary constitutional factor.

The preponderant psychological characteristics of the male patients as a group were their energetic disposition and their tendencies to anxiety, irritability, obsessionality, and hypochondriasis. They tended to correspond with the obsessional personality type.

Actual neurosis was uncommon and the incidence of extraordinary causes of psychological stress was small. The stresses observed were principally those inseparable from an ordinary life to-day.

The women showed a considerably higher incidence of constitutional instability than the men.

The results of medical treatment were disappointing, and on our figures one-third of the patients can be expected to relapse within four months. The failure was not as regards the healing of the ulcers but in the prevention of relapses after return to work.

consequently more attention should be paid in the follow-up period to the adjustment of work conditions, the use of resettlement facilities under the Disabled Persons Act, and the careful discussion with the patient of his social and psychological problems.

We wish to express our gratitude to Dr. G. R. Mather Cordiner for the radiology, to Dr. James Dow for gastroscopy, and to the almoner, Miss H. Montgomery.

REFERENCES

Davies, D. T., and Wilson, A. T. M. (1937). *Lancet*, **2**, 1353.
Draper, G. (1942). *Ann. int. Med.*, **16**, 633.
—— and Touraine, G. A. (1932). *Arch. intern. Med.*, **49**, 616.
Feigenbaum, J., and Howat, D. (1935). Ibid., **55**, 445.
Illingworth, C. F. W., Scott, L. D. W., and Jamieson, R. A. (1944). *British Medical Journal*, **2**, 617.
Jones, F. Avery, and Pollak, H. (1945). Ibid., **1**, 797.
McCarrison, R. (1936). *Nutrition and National Health*, London.
Morris, J. N., and Titmuss, R. M. (1944). *Lancet*, **2**, 841.
Necheles, H. (1937). *Amer. J. digest. Dis.*, **4**, 643.
Robinson, S. C. (1937). *Illinois med. J.*, **71**, 338.
—— (1938). Ibid., **73**, 210.
—— and Brucer, M. (1940). *Amer. J. digest. Dis.*, **7**, 365.
Sandweiss, D. J., Saltzstein, H. C., and Farbman, A. A. (1939). Ibid., **6**, 6.
Slater, E. (1943). *J. Neurol. Psychiat.*, **6**, 1.
Slive, A., Bachrach, W. H., and Fogelson, S. J. (1940). *Surg. Gynec. Obstet.* **70**, 666.
Tidy, H. (1944). *British Medical Journal*, **1**, 677.
—— (1945). Ibid., **1**, 319.
Wilson, A. T. M. (1939). *Brit. J. med. Psychol.*, **18**, 112.
Wolf, S., and Wolff, H. G. (1943). *Human Gastric Function*, New York.

BREAST MILK BANK IN MATERNITY UNITS*

BY

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The importance of breast milk feeding in the neonatal period and in early infancy has been convincingly demonstrated by statistical evidence comparing the mortality and the morbidity rate in breast-fed and in bottle-fed infants, and by studies dealing with the influence of nutrition on resistance to infection. Incidence of infection in infancy is estimated to be twice as high in artificially fed babies as in breast-fed ones, and the death rate ten times higher. Consequently, the obstetrician and the paediatrician alike are as interested in the promotion of breast-feeding as in the provision of breast milk for babies who cannot be breast-fed. These babies particularly are endangered by circumstances interfering with breast-feeding—e.g., prematurity, and illness in the mother or child. Artificial feeding involves an additional risk.

Much headway has been made in the establishment of human milk services, and efficient breast milk bureaux have been created in many places. These institutions receive their breast milk supply chiefly from paid donors, living sometimes in widely dispersed areas, and require, therefore, rather elaborate arrangements for the collection, control, and preservation of human milk and the medical and nursing supervision of the donors. They are hampered by the inconstancy of supply, which depends very much on the good will of the donors and a constant and costly propaganda. The problem, therefore, is how to avoid these difficulties and to provide a service easily accessible to any baby in need of breast milk.

Every maternity unit may be regarded as an ideal background for the creation of an efficient breast milk service. A considerable surplus of breast milk will be available if the rate of breast-feeding is kept at the highest possible level. "Breast-milk-mindedness" should be stimulated in the antenatal period and be continued during the lying-in period in the maternity unit. An attempt was made to realize this aim, and the appropriate arrangements and their results are outlined below.

Routine expression of the breasts after each feeding-time has been introduced in our hospital since February, 1944, as a means of reducing the most frequent causes of artificial feeding—i.e., engorgement of the breasts and disorders of lactation in the puerperal period. This has enabled us to collect from the lying-in mothers of the maternity units enough breast milk to maintain a breast milk bank continuously.

The milk bank has been supplied by two maternity units: Unit I (Queen Mary's maternity department), with 65, and Unit II (maternity extension), with 16 beds. Unit I is reserved for pathological cases listed during the antenatal observation or admitted as emergencies. Unit II admits normal cases only. In 1945 there were 1,984 live births in both units.

* An extract was demonstrated at the meeting of the Middlesex County Medical Society on March 12, 1946.

Method of Collection of Breast Milk

Expression of the breasts is usually started on the second day after birth, and from that time is regularly performed after each feeding throughout the whole lying-in period. Only healthy mothers are taken as donors for the breast milk bank. Most of them have already undergone a full medical examination during their attendance in the antenatal department and associated diseases have been excluded. The mother's hands are thoroughly cleaned, her breasts washed with soap and water, and sterile covers spread, leaving only the breasts free. Mothers and the attending nurses wear masks. Breast pumps, if used, are sterilized, and the milk is collected in sterile containers.

Expression is carried out by a special baby-nursing staff under the supervision of a senior sister. It is best performed manually, and the mothers are encouraged to acquire the necessary skill themselves. Breast pumps are used in cases of considerable engorgement only, or where manual expression is not well tolerated.

The mothers are informed about the purpose of the procedure, and as a rule readily agree to the expression of the breasts and the use of the expressed milk for the benefit of any other baby in need of it. Thus they learn to appreciate the value of mothers' milk. Payment for the expressed milk is not considered, because the measure primarily benefits the health of the mother and her baby.

The amount of expressed breast milk collected is plotted daily, indicating:

Date .....
Number of lactating mothers:
(*a*) Up to four days after birth .....
(*b*) Five and more days after birth .....
Number of breast-fed infants .....
Number of ill infants fed expressed breast milk .....
Total amount of collected expressed breast milk .....
Amount of expressed breast milk distributed to
(*a*) Maternity units .....
(*b*) Sick children's wards .....

Preparation and Storing of Breast Milk

The expressed milk is pooled in the milk kitchen, which is devoted entirely to the breast milk service. After pooling, the milk is boiled for 5 to 10 minutes, then quickly cooled and kept in refrigerators (temperature 40° F., or 5.5° C.) until distribution. In general it is not stored for more than 24 hours. Any surplus beyond the demand of the maternity units is at the disposal of the children's departments of the hospital. In addition there is a certain equilibrium between consumption and supply (shown below in Chart I) that makes special provision for longer storage superfluous.

Bacteriological and Chemical Control

Twice weekly the milk is examined for its bacterial content. Samples are taken before and after boiling. No viable bacteria have been found in any of the samples after boiling.

Chemical analysis of the milk is carried out from time to time. Average specimens show:

	Before Boiling	After Boiling
Protein	1·8–2·2 g./100 ml.	1·5–3·0 g./100 ml
Fat	2·7–4·6 „	3·0–5·0 „
Lactose	5·7–6·5 „	6·2–7·3 „

Thus the pooled expressed breast milk has a composition which is within the physiological limits of mature milk. The concentration of the breast milk constituents due to boiling depends on the duration it is boiled and the provisions against evaporation. Where concentrated feeding is indicated the process of boiling is accordingly extended.

The content of vitamin C in the examined specimens was: before boiling, 3.9–4.6 mg./100 ml.; after boiling, 3–3.4 mg./100 ml. The vitamin C content of breast milk decreases with the duration of lactation and that of expressed breast milk also with the duration of storing. When the boiling is of short duration the

loss of vitamin C is small. Nevertheless, ascorbic acid is administered to premature and sick babies to supply their higher requirements.

Principles of Distribution

A.—Maternity Departments

In general, the breast milk collected and boiled at one feeding-time is used at the next one. The milk is distributed to the following classes of infants:

1. *Premature Babies Until They Acquire Sucking Ability.*—Pure colostrum is made available for the first week. Later on, feeding with concentrated expressed breast milk is started if the baby cannot take the necessary quantity. When breast-feeding cannot be established at all, feeding of expressed breast milk is continued until the baby attains normal minimum weight (i.e., about 7 lb., or 3.2 kg.) Breast-milk feeding is the rule during the stay in the hospital.

2. *Babies During Their Own or Their Mother's Illness.*—The milk of acutely ill mothers is not used, though the danger of infection through the milk is remote, but expression of the breast is continued so as to stimulate lactation. Breast-feeding is restored when the conditions allow. For sick babies the milk is diluted, if necessary, with a 3 to 5% rice gruel, according to their digestive capacity. Full-milk feeding is restored as soon as possible.

3. *Babies Whose Feeds have to be Complemented* (e.g., in cases of hypogalactia and sucking difficulties).—Complementary feeding during the lying-in period is performed with breast milk only. This has proved to be a further stimulus in promoting breast-feeding because the importance of feeding with breast milk is thus continuously demonstrated.

4. *Babies Who Must be Weaned.*—Feeding with cows' milk is not started before the tenth day, and it is done only exceptionally, on indication.

B.—Sick Children's Wards

Breast milk is supplied after each feeding-time and stored at the children's departments in refrigerators until individual distribution. The milk is given to:

1. Babies under 3 months of age, during the acute stage of illness. They are fully or partially fed with expressed breast milk, according to their condition.

2. Premature babies admitted from outside or transferred from the maternity units. In addition, colostrum is made available for this group.

3. Older infants with a special indication—e.g., coeliac disease, severe infections, cows' milk intolerance.

Details of Collection and Distribution

The total amount of expressed breast milk collected from Feb. 22, 1944 (the establishment of the Breast Milk Bank), until April 30, 1946, was 6,147 pints (3,491 litres). Analysis of the figures of collection and distribution within the year 1945 (see Table) reveals various factors influencing the working of a breast milk bank, based on a certain number of donors and covering a wide range of emergencies.

Table showing Analysis of Expressed Breast Milk Collected and Distributed in 1945. (1 *pint* = 0.568 *litre.*)

Expressed Breast Milk	Amount (pints)		Number of Children Fed
	In 1945	Daily Average	
Total collected ..	3,446	9·44	674
Used in:			
Maternity units ..	2,129	5·83	577
Children's wards ..	1,241	3·41	97
Unused surplus ..	76	0·20	—

The number of infants fed with expressed breast milk during their stay in the maternity units was 577. All but 17 of them could be returned to the breast before discharge. Thus the efficacy of the applied measures is obvious. The rate of breast-feeding on discharge from the maternity units was 98.1%, of supplementary feeding 1.03%, and of artificial feeding 0.87%.

Examination of Chart I shows that the most striking features are:

1. *The Fluctuation of Supply.*—The amount of expressed breast milk collected weekly fluctuates between 44 and 86 pints (25 and 49 litres). (The daily collected quantities show a similar fluctuation between a minimum of 4 pints—2.3 litres—and a maximum of 17 pints—9.7 litres.) This may be explained by several facts. The number of fully lactating mothers necessarily changes from day to day. Between the third and the fifth day of lactation the surplus of milk available for expression is at its peak and declines naturally with the increasing demand of the sucking infant. The amount of expressed breast milk rapidly increases between the fourth and the sixth day, followed by stabilization at a level which is approximately half the highest amount. The quantity of fed breast milk shows

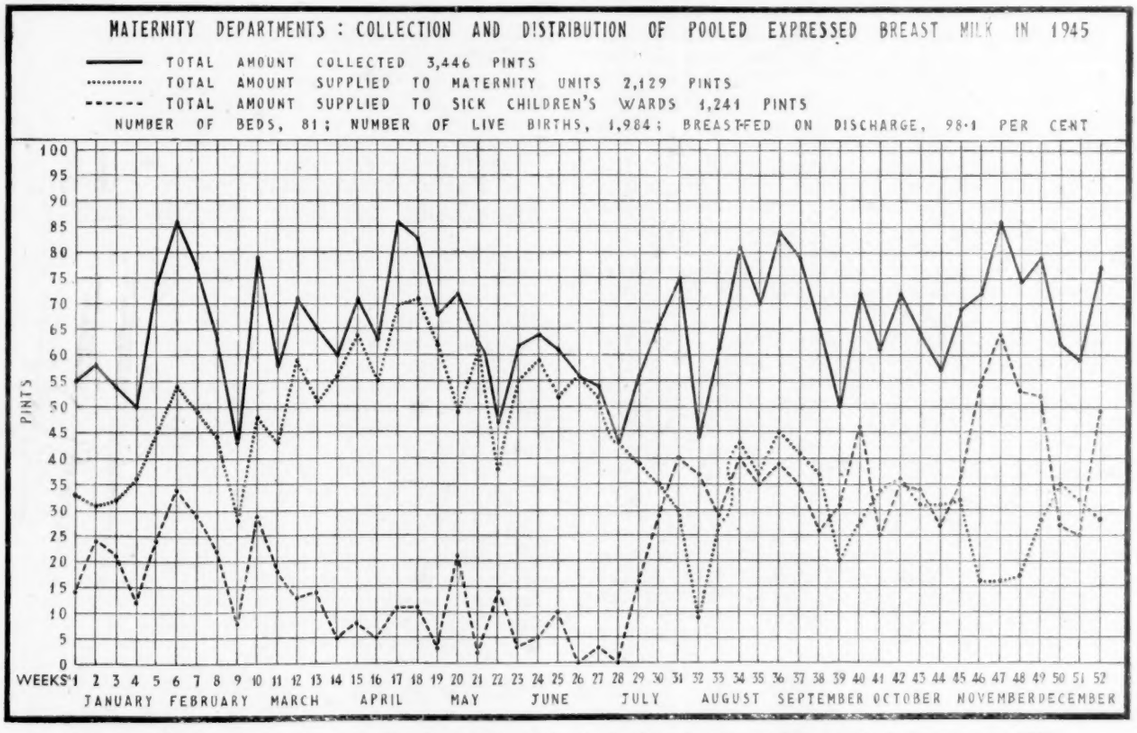
MATERNITY DEPARTMENTS : COLLECTION AND DISTRIBUTION OF POOLED EXPRESSED BREAST MILK IN 1945
TOTAL AMOUNT COLLECTED 3,446 PINTS
TOTAL AMOUNT SUPPLIED TO MATERNITY UNITS 2,129 PINTS
TOTAL AMOUNT SUPPLIED TO SICK CHILDREN'S WARDS 1,241 PINTS
NUMBER OF BEDS, 81; NUMBER OF LIVE BIRTHS, 1,984; BREAST-FED ON DISCHARGE, 98·1 PER CENT
PINTS
WEEKS
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

CHART I.—Showing the weekly fluctuation in supply and in distribution of expressed breast milk during the year 1945.

a steady increase until the tenth day. The curves intersect one another approximately on the fifth day after birth (Chart II). Parity also influences the available amount of breast milk. It is estimated that one in five multiparae produces more breast milk than in her

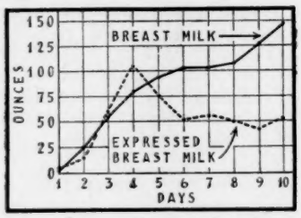

CHART II.—The relation between breast milk and expressed breast milk in ten mothers taken at random and observed during the first ten days after birth.

first lactation period (Chart III). The skill and the co-operation of the staff concerned with the expression is a further factor influencing the result. The pupil midwives in charge of the pro-

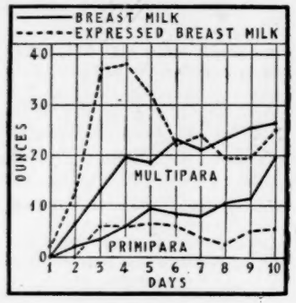

CHART III.—Demonstrating the course of the breast-milk and the expressed-breast-milk curve of a multipara and a primipara.

cedure change in groups fortnightly to three-weekly. Finally the irregularity of supply may be affected by the varying number of ill infants. They are removed from their mothers to the sick babies' wing and the whole amount of milk produced by their mothers is pooled.

2. *The Analogous Course of Consumption and Supply in the Maternity Units.*—The approximate daily requirement of expressed breast milk is known to the staff, and the assumption may be allowed that collection is stimulated by the demand. This relation implies that supply could, in emergencies, still be increased within certain limits. It is one of the principal advantages of this type of Breast Milk Bank with the donors on the spot.

3. *The Longer Peak Period in Some Months.*—The weekly collection of more than 70 pints (39.8 litres) lasted four weeks in August/September and in November/December, compared with only two weeks in other months. No proper explanation could be found for this fact. Seasonal influences may perhaps play their part.

4. *The Continuous Supply to the Sick Children's Wards.*—This depends on the available surplus beyond the needs of the maternity units. Although the consumption in the sick children's wards exceeds for short periods that in the maternity units, a continuous supply to both departments is possible, so that practically every baby in the hospital in need of expressed breast milk can be fed with it.

The question of the reduced nutritive value of expressed breast milk must not be omitted. This is not the place to discuss the whole problem or to set out the arguments, but it should be emphasized that expressed breast milk remains the nutrition of choice in the neonatal period when breast-feeding cannot be established. Where feeding with expressed breast milk has to be continued for a longer period certain additions may become necessary to promote optimal development. At any rate, feeding with expressed breast milk ranks second to breast-feeding and surpasses any artificial feeding, however well "humanized" it may be.

Conclusion

Every maternity unit is a potential Breast Milk Bank. Simple measures that can be carried out within the daily nursing routine are required to create it: (*a*) Propagation of breast-feeding during the whole period of medical control (antenatal period; lying-in period). (*b*) Avoidance of artificial feeding during the stay in the maternity department. (*c*) Routine expression of the breasts after each feeding-time; collection and pooling of the expressed milk. (*d*) Organization of distribution.

The advantages are: simple daily routine in collection and preparation; no special staff or financial measures are needed; the donors are on the spot; medical control is easy; adulteration and contamination of milk are excluded; the supply is continuous and adaptable to the demand and could be extended to out-patients. No ill effect has been noticed.

Breast milk banks in maternity units are a valuable step towards the organization of a comprehensive network of institutions for the supply of breast milk.

Summary

A Breast Milk Bank has been in operation at the West Middlesex County Hospital since Feb. 22, 1944.

The amount of breast milk collected from the lying-in mothers in two maternity units has been sufficient to supply the infants in the maternity units and the sick children's wards.

Until April 30, 1946, 6,147 pints (3,491 litres) of expressed breast milk were collected.

Details of the method of collection, preparation, and storing of the milk, of its bacteriological and chemical control, of the principles of distribution, and of the factors influencing the efficiency of the service are discussed.

An analysis of the figures for the year 1945 is given.

The value of breast milk banks of this type for the promotion of breast-feeding and for the building up of a comprehensive human milk service is emphasized.

My thanks are due to Mr. D. M. Stern, consultant obstetrician, for generously giving me all facilities and help in performing the work, and to Dr. W. Broughton-Alcock, senior pathologist, and Dr. A. C. Spence and Mr. S. G. Wiener for carrying out the laboratory control. I am particularly indebted to Sister F. E. Gilham and the nursing staff working under her supervision. Only their untiring co-operation and devotion to the task, disregarding the additional burden involved during difficult wartime conditions, have made the work possible.

BIBLIOGRAPHY

Advisory Committee on Mothers and Young Children, on Breast Feeding (1944). Rep. No. 91, Ministry of Health, London.
Clark, A. L. (1944). *J. med. Soc. N. Jersey*, **41**, 45.
Committee on Mothers' Milk of American Academy of Pediatrics (1943). *J. Pediat.*, **23**, 112.
Crosse, V. M. (1945). *The Premature Baby*, p. 57, London.
Epstein, B. (1933). *Acta paediatr.*, Stockh., **16**, 521.
Feldweg, P., and Feldweg, I. (1938). *Zbl. Gynäk.*, **62**, 1353.
Freudenberg, E. (1939). *Schweiz. med. Wschr.*, **69**, 515.
Kayser, M. E. (1938). *Arch. Gynäk.*, **166**, 417.
—— (1938). Ibid., **166**, 472.
McCluskey, E. R. (1941). *Proc. Amer. Congr. Obstet. Gynec.*, **1**, 370.
Salmi, T. (1939). *Acta paediatr.*, Stockh., **24**, 111.
Wright, J. (1944). *Mon. Bull. Min. Hlth. Emerg. publ. Hlth. Lab. Serv.*, **3**, 131.

PAINFUL-FEET SYNDROME AMONG PRISONERS OF WAR IN THE FAR EAST

BY

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This account of a distressing and widespread condition seen among prisoners of war in the Far East, resulting from malnutrition, incorporates extracts from the recorded findings of a group of medical officers who, with me, formed the staff of a hospital for prisoners of war in Kobe, Japan, in 1944–5, and who were familiar with the syndrome and had in vain endeavoured to treat it in the several parts of the Far East which felt the weight of the Japanese advance. It will also try to correlate the condition with other diseases better known and associated with malnutrition, with special stress on deficiency of the more familiar factors of the vitamin B complex.

Within three months of the fall of Hong Kong, and later of Singapore, the Dutch East Indies, and the Philippine Islands, beriberi in its typical wet and dry forms became common. It was difficult to treat satisfactorily owing to the inability to give the requisite diet and to the lack of supplies of thiamine, and will not figure largely in this account. Deficiency of vitamins A and C, as revealed by numerous instances of xerophthalmia and mild scorbutic lesions, will also be excluded, as it is thought that the syndrome under review is not specifically connected with those particular deficiencies.

In each of the countries mentioned a condition developed among the men which was known universally and independently as "painful feet" or "electric feet," and often "hot" or "happy feet," the last-named aptly suggesting the dancing movements and attitude of the sufferers. The term "nutritional neuritis" was also used in the early stages to give the condition a more scientific appellation.

The skin lesions of pellagra were widespread, and somewhat later in 1942 the serious nervous manifestations of this condition were prevalent; and, again, in 1943 and 1944 chronic debility with oedema and general emaciation due to hypoproteinaemia was responsible for severe morbidity and loss of life.

As the name "painful feet" implies and the synonyms suggest, this condition is ushered in by severe burning and aching of the feet associated with hyperaesthesia, raised skin temperature, and vasomotor changes in the feet, with general body-wasting. The condition was first seen three to five months after the Japanese occupation in the various countries of the Far East where large prison camps were established. The incidence rapidly increased in the next few months, and in general showed a substantial decrease in the end of 1942 and the early part of 1943. So far as can be ascertained only very few new cases made their appearance in Japan among prisoners who had been transported there from the South Pacific zones, though a number of old cases recurred or became aggravated during the first winter.

Incidence and Distribution

I give as a conservative estimate the figure of 2,000 cases personally witnessed among approximately 7,000 prisoners of war in Hong Kong between the months of May and December, 1942. In the Philippine Islands, in one camp, some 2,000 cases were reported among 7,000 men between July and December, 1942. In Bilibid Hospital, Manila, the census showed 300-odd cases among 800 admissions. In Java, 1.5% of a camp of 3,500 complained of this condition between October, 1942, and the following January. It was also reported to have been known in Malaya, but no figures are available.

No cases occurring in women in civilian internment camps have been reported, and no opinion can be given as to the question of sex incidence.

The syndrome occurred, to my knowledge, among British, Americans, Canadians, Australians, Dutch, Indonesians, and Portuguese, and is reported to have been common among Filipinos, but Chinese and Indian internees were segregated from the main camps, so that no authoritative statement can be made regarding the incidence among them. The great majority of cases were seen among men of military age, but a number appeared in older individuals, up to the age of 62.

Aetiology

During the period of internment, as this was the first occasion that I or my colleagues had seen or read of this condition, and as there were no adequate means of studying the cases on scientific lines, no definite cause could be attributed. However, certain observations were made, and the following theories as to the causation were suggested.

Protein Deficiency.—The greater part of the protein contained in the daily ration was derived from rice and green vegetables, and usually amounted to about 35–45 g. The minimal amount of protein needed for normal maintenance and tissue repair is probably 30–40 g. daily, provided that the protein contains appropriate amounts of the essential amino-acids. The proviso is also made that the rest of the diet should contain enough fat and carbohydrate to supply full energy requirements. Polished rice (which contains approximately 8% protein of low biological value), leaf vegetables, infrequent issues of meat or fish, and an occasional small ration of white bread provided the entire diet. The daily ration in Shamshuipo Camp, Hong Kong, was: rice, 10–12 oz. (280–340 g.); bread, 5 oz. (140 g.); fish or meat, 2 oz. (56 g.); peanut oil, 1 drachm (3.35 ml.). This gave a total protein intake of approximately 40 to 45 g. on days when meat was provided, and a calorific value of about 1,500. This diet provided for a nine-hour working day of manual labour.

Fat Deficiency.—During this period the total daily fat intake seldom exceeded 10–15 g.

Vitamin Deficiency.—All the elements of the vitamin B complex were deficient, as evidenced in the camp by the enormous prevalence of beriberi and of riboflavin and nicotinic acid deficiency lesions. Many of the painful-feet cases showed these lesions, yet many did not; again, many cases manifesting advanced riboflavin and nicotinic acid deficiency never developed painful feet. Yet, nevertheless, it was considered that this syndrome may have been due to one or other of the lesser-known or imperfectly "developed" factors.

Factor Contained in Grain.—In one specific instance, in Hong Kong, a group of prisoners of war who were separated from the main group and interned for upwards of three months in the civil gaol, and were fed on rice with a rich admixture of barley, did not develop painful feet; nor, so far as can be determined, was the disease present in the several hundred persons under detention at the time, whereas their comrades in the main camp, fed on a poor grade of plain frequently musty rice, did. Furthermore, out of a group of 14 cases which were transferred to Japan and in consequence changed to a good-quality grain plus barley, 13 cleared up within four to eight weeks. The fourteenth, an advanced case, did not, but continued to suffer from swelling and hyperalgesia of the feet (which were also usually livid and sweating) associated with anaesthesia along the distribution of the lateral cutaneous nerve of the calf and loss of ankle- and knee-jerks. In contrast to this, a colleague described the occurrence of some 40 cases of painful feet among 400 prisoners after their transference from the Dutch East Indies to Japan. It is conceivable that many of these were borderline cases in which the change of climate, and the low diet and exposure on the voyage, may have been the deciding factors in precipitating symptoms.

Toxic Theory.—The possibility that the syndrome is due to some toxic factor in old and musty rice must be borne in mind—a theory which is supported by the fact that such rice was consumed in every camp in which the condition occurred. However, in an officers' camp in Hong Kong, where similar rice was supplied, the condition did not occur; but better canteen facilities obtained at this camp, where tinned beef, fish, etc., could be purchased to augment the diet.

Minerals.—Blood chemical studies in which calcium and phosphorus estimations were made were reported to have been carried out on some cases among prisoners of war in the Philippine Islands, and deficiency of these minerals was ruled out as a possible cause.

To recapitulate, it is apparent that a basic deficiency is unquestionable, but a careful controlled observation is necessary to give a satisfactory solution.

Pathology

Owing to the absence of facilities for histopathological study, nothing was known of the pathology of this condition. Certain well-marked appearances were seen in a number of cases which later came to the operating table for amputation of gangrenous extremities (toes or feet). In these cases the skin and the subcutaneous tissue gave, on incision, the gritty sensation which is experienced on cutting dense fibrous tissue. Where the bones of the toes, for example, were exposed, slow necrosis of the exposed portions took place, otherwise the bone appeared normal.

The common complaint of shooting pains in the feet and lower legs, associated later with absence of deep reflexes, suggested a radiculitis of the posterior nerve roots. This will be considered later in conjunction with the association of the complaint with the nerve lesions in pellagra. It has also been suggested that the signs and symptoms can be explained on the basis of a true peripheral neuritis.

One is tempted to emphasize the vascular changes, and this aspect of the pathology of the condition portrays a similarity to Raynaud's disease affecting the lower limbs particularly, or erythromelalgia. In discussing the condition, Prof. Kinoshita, pathologist to Osaka University, who was intensely interested, admitted that late cases were seen among Japanese soldiers returned from the South Pacific, and that studies he had made indicated that the changes were primarily found in the vascular system. It is not clear if he investigated the possibility of changes in the spinal cord, but he found definite thickening of the vessel walls and narrowing or obliteration of the lumen of the small arterioles of the feet and legs. Any degenerative changes in the peripheral nerves were secondary to impaired nutrition.

Clinical Picture

Early.—The disease is normally ushered in by a progressively severe burning sensation of the soles of the feet, especially at the metatarsal heads, associated with redness, slight swelling,

hyperalgesia, and often sweating of the part. This stage was then followed by shooting pains along the dorsum of the inner border of the foot to the heel. The pains were more severe at night and during rainy weather. Sleep was interfered with and often impossible, the patient restlessly pacing the floor or seeking relief by exposing the feet to the cold or soaking them in cold water, or sitting in the typical squatting posture, massaging the feet for hours on end. The facies became pinched and drawn, and there was associated emaciation resulting from loss of sleep and depleted appetite. The pulse was usually rapid, but occasionally slow at rest, with marked tachycardia on the slightest exertion. In the earliest stages the gait assumed a typical attitude, with a wide base, inversion of the feet, and internal rotation of the leg and slight flexion at the knee-joints. The patient shuffles, and when standing he keeps shifting his position from one foot to the other, usually wincing with pain as each foot touches the ground. There is marked hypersensitivity of the soles of the feet. In uncomplicated cases the ankle- and knee-jerks and plantar response are present but usually weak. Those cases with concomitant beriberi neuritis complicated the picture by absent reflexes, painful calves, and a positive Achilles tendon sign and squatting test.

Later.—The signs and symptoms all become more aggravated, and mental changes depicting despondency, loss of memory, and general deterioration are noted. The feet begin to show definite circulatory impairment. They become pale and cold, and turn cyanotic when dependent, the cyanosis usually disappearing on elevating the limb. There is diminished pulsation of posterior tibial vessels. Continued exposure to cold eventually leads to gangrene, the great toe being the first affected; then it slowly spreads, and usually becomes self-limiting at the midtarsal joints. (Most, if not all, of the cases of gangrene were seen in Japan, where the added element of a cold climate was the deciding factor in bringing about the gangrenous change. This also came on very rapidly in the case of a number of men who were exposed to prolonged immersion in the sea when a Japanese ship transporting 1,800 prisoners of war was torpedoed off the China coast in September, 1942.) Healing was very slow in the great majority of cases, as it was in wounds and ulcers of any description, but these cases in particular would continue to heal and then break down in a very disheartening fashion.

Treatment and Prognosis

Treatment consisted of rest in bed, with warmth to the legs and feet, and symptomatic analgesia as required. A well-balanced mixed diet with full vitamin content was aimed at. No drug was found which caused any specific improvement. Basing the treatment on the belief that the underlying aetiology was a vitamin deficiency, various available vitamin preparations were used. These included thiamine, per os, parenterally, and intrathecally in some cases. Nicotinic acid, alpha-beta-gamma tocopherol (in the Philippines), vitamin B complex, brewers' yeast, and vitamins A, C, and D have all been used, with indifferent results. Nitroglycerin and histamine were tried in an attempt to produce peripheral vasodilatation, with equivocal results. Quinine is stated to have given symptomatic relief in some cases. Presacral sympathectomy was performed on five advanced cases by Japanese surgeons with no benefit whatever, and with fatal results in two.

The prognosis is good if the full diet as recommended can be provided. In the later cases, with gangrene, general improvement may be expected with an adequate diet; and under good nursing conditions and adequate diet the gangrenous stumps show a tendency to heal much more rapidly.

Discussion

This syndrome, since its first appearance in 1942, has given rise to energetic discussion among medical men who have had occasion to see and treat it. When the earlier cases appeared they occurred in hundreds, and the matter became of the greatest urgency. The camps were already rife with amoebic and bacillary dysentery. In Shamshuipo camp diphtheria was accounting for upwards of three to four deaths daily. True beriberi was widespread, and pellagra in one or all of its clinical forms was responsible for a huge morbidity. The painful-feet syndrome was usually complicated by one or more of these conditions. When in the later months of 1942 its incidence was at its height, and in many cases was complicated by beriberi and by the nerve lesions of pellagra, it appeared to be a concomitant symptom of pellagra. The typical advanced case of this condition gave the following history and showed the following nervous changes.

Several months of painful feet; usually stomatitis; glossitis, in most cases preceded by scrotal dermatitis, tachycardia of about 140 a minute; severe wasting; diarrhœa at intervals; numbness of a mask-like area of the face around the cheeks and lips, often described as being like a "dentist's injection." Within a few days are experienced numbness of the lower chest wall and upper abdomen, and a feeling of constriction encircling the chest below the nipples and of the upper abdomen. Later, numbness extends to the thighs and legs, with weakness of the leg muscles, loss of sense of touch, and heat and pain in the legs and scattered areas of the abdomen and lower chest wall. Deep touch sense is present. All deep reflexes, cremasteric and abdominal reflexes are absent, and there is loss of the normal flexor plantar response. A well-developed extensor response was seen in some very few cases. In some instances tingling sensations of the fingers and numbness and weakness of the forearms and hands were complained of.

It might be timely here to mention that it was possible in the camp in question to transfer only a very few patients at very infrequent intervals to a hospital on Hong Kong Island, where better nursing facilities and food were available. A few of these cases thus survived. Also, this period was marked by the providential arrival of Red Cross parcels and bulk foods, so that tinned beef, butter, cheese, cocoa, and ghi were available. A small daily issue of a yeast–flour suspension was also made. This latter had been provided for some months, but the small quantity available and the doubtful efficacy of flour as a medium for the yeast culture rendered its value open to question. This diet, and the arrival of Japanese preparations of nicotinic acid "pellagrin," marked the turning-point in what truly was a nightmare, and many patients began to show a gradual improvement. Others who were not so fortunate as to derive the benefits of care in hospital before the arrival of the food became rapidly emaciated, and death followed from right-heart failure. I was transported to Japan at this time—January, 1943—and am unable to give any account of the follow-up of these cases.

In November, 1942, a series of these advanced cases were demonstrated to a number of medical men to show their great similarity to subacute combined degeneration. Some exhibited the posterior-column changes weeks before the pyramidal tract involvement became evident, and vice versa.

It might be suggested that the "painful-feet" symptom is a radiculitis of the posterior nerve roots, the disease affecting the pain-sensibility fibres in the posterior roots and the pain being referred to the skin, muscle, and bones of the extremities. It would appear that the pellagrinous process would concentrate on these structures, in many cases without spreading to or affecting the posterior columns. When the columns become involved and degeneration starts the pain and hyperalgesia disappear.

The absence of an extensor plantar response in the great majority of instances when other evidences of pyramidal damage were present was perhaps due to a concomitant early peripheral neuritis affecting the legs in those cases which had shown the painful-feet syndrome.

Summary

The widespread occurrence of a distressing and serious syndrome among prisoners of war in the Far East, affecting the feet, with accompanying constitutional signs and known as the "painful-feet" syndrome, is described. Owing to the lack of laboratory facilities, diagnostic aids, and controlled investigation, no satisfactory conclusions were reached as to the exact aetiology, but, from the study of a very large number of cases from the onset, the syndrome would appear to be the result of a deficiency of a factor or factors in the vitamin B complex closely allied to the P.P. factor, but primarily affecting the peripheral arteries of the lower extremities, or possibly be due to a toxic factor in old musty polished rice, associated with a low protein intake and reduced vitality.

The appearances in the early stages, when redness and swelling of the feet were the predominant signs, are similar to those of erythromelalgia as first described by Weir Mitchell. It clearly is not an angioneurosis and is not associated with a neuropathic diathesis.

The disease is amenable to treatment by replacement of the deficient elements in the diet, but otherwise is rapidly progressive, ending in death or serious crippling deformities

FACIAL PALSY ACCOMPANYING ACUTE MASTOIDITIS

WITH COMMENTS ON CHEMOTHERAPY IN ACUTE SUPPURATIVE OTITIS MEDIA

BY

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Pre-operative facial palsy occurs in about 2% of all cases of otitis media, acute and chronic, but is a much more common complication of chronic or acute-on-chronic otitis media than of acute otitis media *ab initio* (Kettel[1]). Presumably, therefore, this complication of acute mastoiditis is comparatively rare. Apart from the four cases now presented, I have only once previously seen a similar case of facial palsy resulting from an acute mastoiditis, but have met with the condition three times following an exacerbation of chronic otitis media.

Reports of Four Cases

Case 1.—This patient was a girl aged 5½ years. On Sept. 12, 1945, she complained of headache, but had had no previous ear trouble. On Sept. 14 epistaxis occurred, and on the 15th there was slight left otorrhoea. Next day a pulsating left aural discharge, a tender mastoid process, a partial left orbicularis palsy, and complete paralysis of the lower left face were recorded. Cortical mastoidectomy on Sept. 16 revealed a grossly infected cellular mastoid containing much pus; the sigmoid sinus and dura were both exposed and found healthy. The wound was closed with dependent tube drainage. On Sept. 25 the facial palsy was resolving, and by Oct. 6 recovery was complete. The tympanic membrane and the hearing were then normal.

Case 2.—A boy aged 19 months, when admitted on Sept. 12, 1945, had had left otorrhoea for three days. No history of earache was at this time reported by the parent, whose intelligence, however, was below the average. The left tympanic membrane was thick and red, with anterior perforation. Otorrhoea was profuse, and there was complete left facial palsy (of three days' duration). Cortical mastoidectomy revealed an extensively diseased mastoid containing much muco-pus. On Oct. 17 left facial palsy was still present, but with slight furrowing of the left brow on crying. The tympanic membrane and the operation wound healed. A further follow-up was unsuccessful in spite of several requests to attend as an out-patient.

Case 3.—A boy aged 9 years, admitted Oct. 6, 1945, had had left otorrhoea for two weeks, and left complete facial palsy for one week. There was no history of previous ear trouble. Left cortical mastoidectomy revealed a very necrotic mastoid. The wound was closed with tube drainage, but was reopened on Oct. 27 because of the onset of a low but swinging temperature due to some pocketing of pus. On Dec. 21 the palsy was beginning to recover and the tympanic membrane and the operation wound had healed. Hearing normal. By Jan. 11, 1946, recovery from the facial palsy was complete.

Case 4.—Mr. A., aged 36, attended hospital on Nov. 5, 1945, for left acute suppurative otitis media with otorrhoea. He was treated with a sulphonamide—2 g. daily for five days. The otorrhoea ceased, but some deafness persisted. There had been no previous ear trouble. On Dec. 24 left otalgia followed coryza, and next day there was left otorrhoea. On the 26th the "left side of the face went stiff." Examination on Dec. 28 revealed muco-pus in the left meatus. Deafness was marked, but he had no mastoid tenderness. The temperature was normal. There was complete left facial palsy. Pus was present in both sides of the nose. Cortical mastoidectomy on Dec. 29 revealed a grossly infected cellular mastoid (thick cortical bone) with a deep abscess cavity in the tip containing about a teaspoonful of thick pus under pressure. In the antral region the lining membrane was markedly swollen. A bipp pack was inserted and the upper part of the wound sutured. On Jan. 1, 1946, progress was satisfactory, but the facial palsy was still complete. By Jan. 5 the palsy was beginning to recover in the brow and orbicularis region, and on the 8th recovery was almost complete. On Jan. 22 the patient had quite recovered from the facial palsy, the tympanic membrane was normal, the operation wound had healed, and hearing was normal.

Comment

Faradism was not employed in any of these cases, chiefly because its repetition ruins the morale of children, however painstakingly given, and its value seems doubtful in this type of case. Case 3 showed perfect recovery after nearly eleven weeks of complete paralysis. Splints of any kind were dispensed with for reasons similar to those given above.

Case 4 illustrates one of the pitfalls of sulphonamide therapy in otitis media; there are many others, which are easily explained by the usual pathological and anatomical changes resulting from the bacteriostatic action of the sulphonamide, which, while localizing the infection of a sensitive and accessible organism, in some cases leaves a focus of living though temporarily attenuated bacteria, while in others a focus of devitalized tissue, incapable of offering any effective barrier to a new infection, remains.

That the latter condition obtained in Case 4 is obvious. His course of a sulphonamide actually or apparently cured the otitis media by Nov. 10; but another attack on Dec. 24 led to an advanced mastoid infection, with a large tip abscess and a facial palsy, within five days, as found at operation on Dec. 29. This infection travelled rapidly by preformed pathways—i.e., those laid down five or six weeks previously.

The position of sulphonamide therapy in otitis media is difficult to assess,[2] and, as in other forms of treatment, the decision to use or not to use it in any individual case rests as a rule with the general practitioner. He will have to make this decision himself, and, if he decides to administer a sulphonamide drug, then it is as well to bear in mind the possibility that a subsequent relapse or reinfection may with considerable rapidity lead to dangerous complications—perhaps more serious than a facial palsy.

In these cases the infection may be compared with that of a mechanized army advancing over suitable country with supply dumps in abundance already laid down and perhaps a few useful hardened veterans (the sulphonamide-fast bacteria), who have survived the previous rout and have since been lying low, to assist it.

Probably it will prove wiser to reserve chemotherapy for cases which show a tendency to spread outside the mastoid process or which are part of a general septicaemia from some other focus; such cases are best treated in hospital, where all necessary investigations can be made and penicillin be conveniently given, with appropriate surgical intervention if necessary.

Summary

Four cases of spontaneous facial palsy occurring as a result of acute mastoiditis are described; three showed complete recovery at varying intervals after the Schwartze operation; the fourth could not be followed up.

The position of sulphonamide treatment in cases of acute suppurative otitis media and acute mastoiditis is discussed.

I am much indebted to Mr. J. W. MacLaggan, Mr. F. Watkyn-Thomas, and Mr. A. Ryland—under whose care Cases 1 and 3, 2 and 4, respectively, were admitted—for giving me the opportunity of operating upon and subsequently looking after these interesting cases.

REFERENCES

[1] Kettel, Karsten (1943). *Arch. Otolaryng.*, **37**, 303. (Quoted in *British Medical Journal*, 1943, **2**, 752.)

[2] *J. Laryng.*, 1945, **60**, 298. (*Proc. roy. Soc. Med.*, Sect. Otol., March, 1945.)

TREATMENT OF PEDICULOSIS CAPITIS WITH D.D.T. EMULSION

BY

A. D. FRAZER, M.D., D.P.H.

Investigators of its toxicity agree generally that D.D.T. is practically safe when applied externally as a dried powder or in dilute solution (see *Journal*, 1945, **2**, 260). Repeated contact with concentrated solutions is dangerous, but early warning of intoxication is to be expected in anorexia. Scobbie (1945) found that in the treatment of pediculosis capitis the nearest approach to an ideal was D.D.T. emulsion, which killed the lice and persisted in the hair long enough to kill all the larvae. She did not find any toxic reaction or irritation of the scalp or skin after its use. In spite of a fairly large number of publications agreeing generally with the above findings, there still seems to be a fear of possible danger in the use of D.D.T. for pediculosis, and in consequence it is not widely favoured. The experiences of a Nottingham clinic may be of interest, therefore, as during the last eighteen months over 400 patients have been treated without ill effect. At first a 4% solution of D.D.T. in liquid paraffin was used, but since March, 1945, the emulsion found so successful by Scobbie has

been substituted. The formula* is as follows: D.D.T. 2%, naphtha 15%, emulsifying agent 5%, water 78%.

Method of Treatment

Before treatment is started the female patients are advised to bring a scarf or square of material in which to tie up the hair. The emulsion is a clear, colourless fluid, but after application the hair becomes lank. The turban hides this and permits the patient to go home without embarrassment.

A jaconet cape is spread over the shoulders to protect the clothes, and the emulsion is thoroughly worked into the hair and scalp with a two-inch (5-cm.) paint-brush. The patient is then free to go home, and is directed to wash the hair before attending the following day. At this visit nits are removed with a nit-comb. Usually one combing is sufficient, but if the hair is heavily infested two or more may be needed.

At first, observation was maintained for three weeks before the patient was discharged as cured, but with experience of 100% success this period was gradually decreased, until now attendance is excused as soon as all the nits appear to have been removed by the comb—i.e., usually on the second visit. As the majority of patients are sent from antenatal clinics, factory ambulance rooms, and schools, observation is maintained elsewhere, and the fact that these patients are not referred back upholds my belief that cure is indeed obtained.

Observers have found that contact with the emulsion kills lice in about half an hour, and this was confirmed by personal test. Lately, therefore, the hair has been washed one hour after treatment and the usual combing carried out then. So far as one can judge from a small series, this speedy method appears to be as successful as the longer one.

No signs of intolerance have been found, except that in one case, where the woman had extensive impetigo as well as pediculosis, the nose, forehead, and eyelids were inflamed and swollen the next day. This reaction disappeared in a few days.

When the scalp is secondarily infected, the pediculi are attacked first. Treatment is given as described above. On the second day, when no live lice are present, the hair is cut as required and the septic area attended to. This makes the task of dealing with such cases much less unpleasant for the nursing staff and reduces to a minimum their chance of picking up pediculi from the patients.

Summary

Treatment of pediculosis capitis by means of an emulsion of D.D.T. is described. Success is claimed for over 400 patients. No intolerance was experienced in the uncomplicated cases. One patient with secondary impetigo had a brief inflammatory reaction.

The method of treatment is rapid and easy. Washing of the hair before treatment is unnecessary, this saving contamination of towels. From the point of view of the nursing staff the method is the least unpleasant of all previously tried.

I wish to thank the nursing staff, and especially the sister in charge, for their interest and co-operation in this work.

REFERENCE

Scobbie, Elizabeth B. S. (1945). *British Medical Journal*, **1**, 409.

* Kindly supplied by the makers as "liquid derbac."

The first number of the *British Medical Students' Journal* has recently been published under the editorship of Mr. P. D. Wall. It is designed to appeal to medical students throughout the British Isles, to present them with articles of topical, social, and scientific interest, and to foster international co-operation. The present number differs from the form planned for its successors in being devoted to an account of the World Students' Congress at Prague in November, 1945, and contains an interesting summary of the medical situation in Czechoslovakia as it existed during the winter 1945–6. The shortage of fuel, food, clothing, etc., was severe, the normal food ration for nurses, for example, being equivalent to 1,600 calories a day; and many drugs were unobtainable, particularly those developed in the Western countries since 1939. An interesting comment on housing is provided by the following note: "Houses—25,000 destroyed in E. Slovakia alone. Homeless—200,000 homeless. All but 20,000 housed by November. The remainder housed by the end of November." The next issue of the *B.M.S.J.* is promised for the beginning of October. The price is sixpence to members of the B.M.S.A. and allied organizations, one shilling to non-members.

Medical Memoranda

Criterion for Conservation of the Bowel in Strangulation

Most standard surgical works give sundry criteria of viability of a strangulated portion of bowel, tacitly assuming that if these are satisfied the bowel should be conserved.

CASE HISTORY

A woman aged 51 years, who had had a hysterectomy for fibroids a year previously, was operated upon by me on Oct. 19, 1945, for strangulation due to a band. The acute symptoms were of 48 hours' duration. A single band was found, strangulating a loop of lower ileum; there were no other adhesions. The loop was freed and, after rather prolonged efforts at revival, pronounced viable, and returned to the abdomen. Convalescence was uneventful, and the patient went home 16 days after the operation.

I was asked to see her again on Nov. 16—i.e., exactly four weeks after the operation. She had the same train of symptoms as before, of 12 hours' duration, but on this occasion a fixed mass was palpable in the lower abdomen. At laparotomy the mass proved to be composed of the coils of a loop of lower ileum all closely matted together and quite inseparable. There were no adhesions elsewhere in the abdomen. A short-circuiting lateral anastomosis was performed, there being just enough ileum below the affected loop to allow of this. The patient again made an uninterrupted recovery, and went home 15 days after the operation. She has remained well since.

COMMENT

There can be little doubt that the matted coils found at the second laparotomy were those of the loop that had been strangulated and conserved on the first occasion. Equally certainly the loop cannot have been fit to be returned, and it may be pertinent to remark that many surgeons would not have done so. It is undeniable, however, that the loop was viable, since it was found, living, a month later.

Two possibilities suggest themselves: (i) That there was a localized non-viable portion that did actually perforate, the perforation subsequently becoming sealed. Against this are the facts that convalescence was uninterrupted and that the adhesions found later were very strictly localized. (ii) The matting was due to organization of exudate from a very seriously damaged but still viable portion of bowel.

Any peculiar liability of the patient to form adhesions may be excluded, since there were none elsewhere.

Two points of interest emerge: (*a*) In assessing the fitness or otherwise for conservation of a strangulated loop a higher standard than mere viability must be adopted. The bowel must be capable of recovering without such outpouring of exudate as may lead to adhesion formation. (*b*) Adhesions strong enough to cause obstruction were formed in 28 days exactly. Though this is not very remarkable, such observations are always useful, since precise information as to such time intervals is often required in medico-legal cases, and is rarely forthcoming.

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Spinal Analgesia in an Infant 11 Days Old

The following case may be thought interesting enough to put on record.

CASE REPORT

An infant 10 days old was admitted to the Fleming Memorial Hospital for Sick Children, Newcastle-upon-Tyne, on May 8, 1946, with pneumonia. It apparently also had a patent ductus arteriosus. On the next day abdominal distension developed, and, a mass being palpated in the right hypochondrium, a diagnosis of intussusception was made, and an operation was decided upon.

Spinal analgesia appeared to be the method of choice in such a case. The patient was placed on his side on the operating table, which was inclined 15° head up, the child's head being depressed on to his left shoulder. Spinal puncture was performed between L 4 and 5 with a gauge 17 hypodermic needle, and 0.5 ml. of "light" nupercaine (1 in 1,500) was injected fairly rapidly without barbotage. The needle was withdrawn and the patient turned on his back, the head-up inclination of the table being maintained for a further 2 minutes, when it was levelled. No vasopressor was used. After 10 minutes analgesia was only just suprapubic, and a further puncture was made. The technique was the same as before, save that a fine Pitkin spinal needle (22 G) was used, as the sharp hypodermic needle made the transfixion of the theca difficult to be perceived, and its narrow bore impeded the flow of C.S.F. The second dose of "light" nupercaine was 1 ml. Analgesia appeared immediately, and extended above the costal margin. Laparotomy

was performed, the analgesia proving adequate, and the infant showing only slight resentment when the subphrenic region was explored. Unfortunately, the condition was not found to be amenable to surgery. There was a congenital atresia of the colon: the mass which had been palpated in the right hypochondrium proved to be a greatly enlarged liver. (It must be remembered that the abdomen was greatly distended and examination had been difficult.)

Half an hour after operation the patient was remarkably well, and the general post-anaesthetic condition was most satisfactory. Unfortunately, death ensued 24 hours later; necropsy revealed: (1) consolidation of the bases of both lungs; (2) a greatly enlarged liver containing a number of pyaemic abscesses (the result of an umbilical infection); and (3) partial atresia of the large bowel throughout its whole length, with intestinal obstruction.

COMMENT

Although this infant died, the case was, from an anaesthetic point of view, completely satisfactory, and the anaesthetic, far from contributing to the cause of death, permitted an abdominal operation to be performed without any apparent change in the child's condition. The chief interest lies in the dosage employed. The records of spinal analgesia in infants are scant; Lundy (1942) advises 1 mg. of procaine per pound of body weight, but such a method of assessing dosage is open to obvious criticism. If analgesia be desired to extend up to the fourth thoracic segment, in order to block the splanchnic nerves, as is usually recommended for upper-abdominal operations, it would seem that, with the technique described above, 1.3 ml. would be a suitable dose for an infant of the age of a fortnight or less.

M. H. ARMSTRONG-DAVISON, M.B.E., M.D., D.A.

REFERENCE

Lundy, J. S. (1942). *Clinical Anesthesia*, p. 207, Philadelphia.

Vesical Calculus complicating Procidentia

As I understand that vesical calculus is rare in women, this report of a case, discovered in a patient of 84 nine months after an operation for prolapse, may be of interest. I have seen only one other case, which was caused by two silk sutures which had been passed into the bladder at a vaginal hysterectomy done elsewhere. I have come across a reference to one in an older patient (aged 93), and treated more correctly by incision of the bladder through the vagina, and Prof. Chassar Moir (1942) recently recorded a similar instance. I also remember Mr. O'Sullivan showing a patient at the Royal Society of Medicine with procidentia complicated, I believe, by 13 calculi. The correct treatment is presumably to remove the stone from below. The fault in the following case lay in not suspecting it. The moral is to *x*-ray the bladder in long-standing cases prior to operation.

RECORD OF CASE

Mrs. X. had since the age of 28 complained of prolapse. Her trouble was of 55 years' standing, for she was 83 when I first saw her. For a year the prolapse had been complete, and as it was no longer controllable by pessaries she sought surgical relief. She had had some disturbance of micturition for a year; it seemed to be a retention with overflow. Her blood pressure was 190/130, but she was pronounced by Dr. Norman Hill to be "as fit as anyone of 83 could be."

On Oct. 1, 1942, I performed a Le Fort's operation on her, pentothal, gas, and oxygen being given by Dr. Langton Hewer. Four days later she developed a urinary infection, which failed to respond to citrates but which was ameliorated in fourteen days with calcium mandelate. She was up in three weeks, and after another month, during which time she had several mild colds and an attack of rheumatism in the left ankle, she left hospital. The *B. coli* was still present in the urine.

Nine months later her doctor wrote to say that for some time she had had haematuria and strangury, and to ask me to take her in again. She was admitted in August, 1943, attributing the incontinence to having caught a cold on her way home. Though now 84 her condition was as good as previously; the anatomical result of the operation was satisfactory. On Aug. 12 Dr. Organe gave her gas-and-oxygen, and by the cystoscope I at once located the stone. I thereupon did a suprapubic cystotomy and removed a calculus weighing $1\frac{3}{4}$ oz. (49.6 g.), and measuring $2\frac{5}{8} \times 1\frac{5}{8} \times 1\frac{1}{4}$ in. ($6.7 \times 4.1 \times 3.1$ cm.). The suprapubic catheter was out in fourteen days, and she left hospital after eight weeks. In February of this year she was reported to be very well and free from symptoms, passing urine normally. *X*-ray examination of the stone shows well its laminated composition. There is no foreign-body core, and I presume it to have been formed by long-standing partial retention of urine.

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REFERENCE

Moir, Chassar (1942). *J. Obstet. Gynaec. Brit. Emp.*, **49**, 169

Reviews

FUNDAMENTAL PROBLEMS OF THE ORGANISM

The Directiveness of Organic Activities. By E. S. Russell, D.Sc., F.L.S. (Pp. 196; illustrated. 8s. 6d.) Cambridge: The University Press.

When vitalism passed out of fashion, biology became completely mechanistic. Dr. E. S. Russell is not at all surprised at this, because man, having won his great triumphs through machinery, has a natural tendency to adopt a mechanical explanation. It suits his mental outlook, for he is *Homo faber* (his behaviour gives him no right to be termed *Homo sapiens*). It is only natural that the study of structure became the first aim of biology. In this way a solid body of information was built up, but the field naturalist was at a discount. Indeed, MacBride went so far as to call T. H. Huxley a "necrologist" rather than a biologist. By the turn of the century the inadequacy of this approach was recognized and function has been intensively studied. Even here, too, everything had to be fitted in with the rigid physico-chemical laws known at the time. A good many biologists found this procrustean bed very uncomfortable. Moreover, that all the adaptations of life could be explained as due to the piling up of a vast series of chance variations seemed to them to present a cosmogony as unacceptable as that of the book of Genesis. Free lances like Samuel Butler might talk of "unconscious memory" but for a professional biologist to express belief in the inheritance of acquired characters is to court ostracism.

Dr. Russell provides us with a partial escape from the dilemma. He points out that the mechanistic explanation leaves out of account all that is distinctive of life—the directiveness, orderliness, and creativeness of organic activities—and completely disregards its psychological aspect. Rejecting both the mechanistic and vitalistic hypotheses as equally inadequate, he tackles the fundamental problems presented by the organism as a living and developing whole, striving to complete its life cycle. He illustrates his thesis by a number of fascinating examples of the way in which the organism adapts itself to changes in environment. As Cannon wrote—"the wonder increases when we realize that the [organic] structure itself is not permanent but has been continuously broken down by the wear and tear of action and as continuously built up again by processes of repair." The unstable and self-regulating organization reached in the development of the living organism is, therefore, something totally different from a stable equilibrium which is the natural end state of an inorganic system. "Life is a dangerous adventure; inorganic processes tend towards stability."

This in barest outline is the author's view; he is aware that it is likely to arouse strong differences of opinion, but all must agree on the exceptional interest of the book and on the excellence of the examples chosen to illustrate his contention.

CARDIOVASCULAR DISEASE

Cardiovascular Disease in General Practice. By Terence East, D.M., F.R.C.P. Second edition. General Practice Series. (Pp. 198; 40 illustrations. 12s. 6d.) London: H. K. Lewis and Co. 1946.

This second edition of Dr. Terence East's manual appears eight years after the first. It is particularly welcome, for it is the most practical, up-to-date, and well-balanced short book on the subject. The war years have seen important new developments in the therapy of cardiovascular disease, and in this volume will be found reference to thiouracil, to ligation of the patent ductus, and even to the extensive sympathectomies still under trial for hypertension. In spite of the limited scope of the book—it has only 191 pages—the author has found room for consideration of certain problems commonly encountered in general practice, such as heart conditions in the middle-aged and elderly, the relation of heart disease to pregnancy, the question of athletics, and lesions of the peripheral arteries and veins. Dr. East has naturally omitted any treatment of electrocardiograms from a work of this size, but he gives an account of the indications for the use of this instrumental method of investigation and the kind of information to be gained from it. By economy of phrase and avoidance of theoretical discussion

a readily understandable and practically useful work has been achieved and certainly many practitioners of medicine will derive from it help in both diagnosis and treatment.

HEALTH INSTRUCTION

Health Instruction Yearbook, 1945. Compiled by Oliver E. Byrd, Ed.D. Foreword by Walter H. Brown, M.D. (Pp. 344. $3.00 or 18s. 6d.) California: Stanford University Press; London: Oxford University Press.

This year book, compiled by Prof. Oliver E. Byrd, is the third annual volume of the series, and is intended for teachers, students, doctors, nurses, and others concerned with problems of health. It consists in an analysis of 316 articles which have appeared in various American scientific journals during the twelve months preceding publication, and it forms a readable and instructive reference book.

In the introductory chapters, which relate to health as a social problem, it is maintained that inhabitants of the U.S.A. are "far away the best-fed people in the world," and that their average length of life in 1943 was 64½ years. The chapter on nutrition describes in considerable detail the recent investigations on vitamins, especially on the vitamin-B complex. Diets deficient in this vitamin cause men first to lose their willingness and then their ability to do hard physical work. The chapter on heredity discusses the Rh factor, and records the opinion of one investigator that the discovery of the factor in 1940 is perhaps the most significant single discovery hitherto made in medical genetics. It is stated that 11% of all the marriages in the U.S.A. are potentially dangerous in terms of incompatibility (father Rh-positive and mother Rh-negative). The chapter on infection and immunity refers to the unique law passed in 1943 by the State of Alabama which requires all civilians between the ages of 14 and 50 to have their blood examined for syphilis. In the three counties in which the blood-testing programme has been completed, 2.2% of the whites and 20.5% of the negroes were found to be infected. One investigator points out that the world "missed the boat" by almost seventy years in respect of the insecticide D.D.T., the use of which would have saved millions of lives. It is maintained that, under American development, it has proved to be one of the greatest medical advances of the war and possibly of all time.

Subsequent chapters of the book deal with such topics as habit-forming substances, safety, family health, school health, and occupational health, and there is a final chapter on trends and possibilities. This is of special interest at the present moment as it discusses the Wagner-Dingell Bill, which was introduced in Congress in May, 1945. Its provisions include compulsory health insurance for all persons covered by Social Security, and a 10-year Federal State maintenance of hospitals, health centres, and clinics.

PRINCIPLES AND PRACTICE OF SURGERY

Principles and Practice of Surgery. By W. Wayne Babcock, M.D. With the collaboration of members of the Faculty of Temple University. (Pp. 1,331; 1,141 engravings and 8 coloured plates. 60s.) London: Henry Kimpton.

Wayne Babcock is a surgeon with an international reputation, and his *Textbook of Surgery* was widely known and appreciated. Using this book as a basis he has now produced, with the help of 37 collaborators, an enlarged book entitled *Principles and Practice of Surgery*. All these writers are members of the Faculty of Temple University, Philadelphia; by thus choosing his team from a single school the chief author has tried to avoid the duplication and conflictions so commonly found in books of multi-authorship. The volume is intended to "supply the student and practitioner with a working knowledge of common and rare surgical conditions occurring not only in the United States but throughout the world."

Viewed in a broad way it may be said that the book fulfils its object in its 1,300-odd pages, but we cannot help feeling that the inclusion of so many rare diseases has led to serious curtailment of the space available for the commoner conditions, and so one gets the impression of a lack of balance. Thus although such conditions as the Klippel-Feil syndrome, Hand-Christian-Schüller disease, polyostotic fibrous dysplasia, receive attention, Russell's viper venom is not mentioned in the treatment of haemophilia, nor excision of the patella in the treatment of fracture of that bone, nor Helfet's aluminium acetate treatment of osteitis deformans—yet these are much commoner conditions. One could cite many more examples where common conditions are inadequately described and dismissed in a short paragraph while rarer diseases receive more attention. There are also places where the language is ambiguous (a serious defect in a book intended for students), and there are uncorrected misstatements. For instance, in discussing post-spinal headaches it is noted that they have been ascribed to a dural leak "proved not to be due to sharp needles"; the uninitiated may well inquire what this really means. Then lymphopathia venereum is differentiated from lymphogranuloma inguinale, though on the preceding page they are said to be synonymous. The freezing point of sea water is given as 1.9° C. in a description of immersion foot; there is no mention of neurectomy in the treatment of Morton's metatarsalgia; thiouracil is not noted for thyrotoxicosis (but there is a reference in the bibliography); and Pancoast's name is mentioned but not his disease.

All these are perhaps rather small points, but they are deliberately noted here to show that the book needs rather more careful editing; the certainty of further editions will provide an opportunity for this. There is, however, a lot more to be said in favour of the book; in particular those sections which contain Dr. Babcock's personal contribution—e.g., rectal and vascular surgery—can be praised. The illustrations (there are over a thousand of them) reach a very high standard and are exceptionally useful—the few coloured plates are among the best we have seen, and the reproduction of all is beyond criticism. Indeed the whole format is good, and there is a forty-page bibliography and a full index (so essential in a book of this character) at the end.

To sum up, our impressions are that the book is a very fine production; the editor has made a valiant attempt to reduce the whole of surgery, including all its aspects such as operative technique, materials, etc., into the compass of a single volume of reasonable size. If the effort has not been 100% successful it is due to the enormous scope of modern surgery rather than to any defect on the part of the authors.

Notes on Books

A small book, *Curare-Intocostrin*, published by E. R. Squibb and Sons, New York, contains a very useful account of the recent literature on curare, and in particular of its use in shock therapy and in anaesthesia. Intocostrin is an extract of curare which is standardized by a method said to be very accurate, but which appears from the description given to be a rough method only. The solution is injected slowly into the ear vein of a rabbit and a dose is determined which just prevents the animal from raising its head; this dose is expressed per kg. body weight. This is the only information on this very important matter which is given in a book of 291 pages. There is no statement of the number of animals used, and no evidence presented to indicate the accuracy attained. This is a serious omission. The need for curare in shock therapy is considerable; thus Easton and Sommers state (*J. nerv. ment. Dis.*, 1944, **99**, 256) that in a series of 800 cases treated with metrazol (leptazol) there was a fracture incidence of 26%, and that in the 209 cases of fracture 535 vertebral bodies were involved. It is therefore not surprising that they think that curare should always be used as a supplement. The maximum curare effect is reached in two minutes after intravenous injection. The best dose is one which produces weakness of the neck muscles so that there is great difficulty in raising the head from the pillow. After a smaller dose there is insufficient protection of the long bones and spine, and after a larger dose there is respiratory arrest.

Introduction to Present Day Psychology. By Dr. CURT BOENHEIM (Staples Press, Ltd., 12s. 6d.) is based on 24 lectures given under the auspices of the W.E.A. in Reading University. Prof. Wolters in a foreword praises its clarity of writing and its eclectic approach. The author has naturally paid greatest attention to his own work in child guidance, dealing at length in the first part, "Psychology," with play, perhaps to the detriment of other highly important subjects, and in the second part, "Applied Psychology," with child guidance, leaving other chapters on psychiatry, general medicine, industrial psychology, and delinquency to be sketched in somewhat perfunctorily. On the whole the book is free of technicalities, except in the chapters dealing with the psychological theories of Freud, Jung, and Adler, where it is inevitable that some technical terms should be used. For those who wish to learn anew something of this complicated subject Dr. Boenheim's introduction is to be commended.

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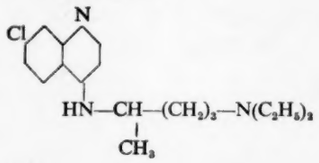
NEW AMERICAN ANTIMALARIAL COMPOUNDS

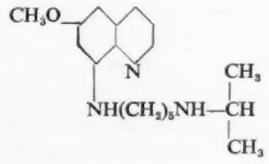
Paludrine is the new British antimalarial compound.[1] Now that the wartime censorship has been raised it is possible to describe the new American antimalarials. When Japan entered the war and supplies of quinine were cut off a search for new compounds was begun under Government auspices on the vast scale congenial to our transatlantic neighbours. More than 14,000 compounds were examined at a cost of almost £2,000,000. During this work much knowledge was gained about the best ways of using mepacrine (atebrin) and about the biology of the malaria parasite. The main attention of the American investigators, however, was directed to the finding of new and better antimalarial compounds; the results of their work are now being made public, and two types of drug show particular promise.

The first group includes chloroquin, or resochin, also known as SN 7618, which is 7-chloro-4 (4-diethylamino-1-methylbutylamino) quinoline.



This compound has an interesting history. When the Allied Forces occupied Tunis in 1943 they found that a secret German preparation called sontoquin (later renamed 6911) had been sent there for trials against malaria. Workers at the I.G. Farbenindustrie had synthesized sontoquin before the war; but it was considered to be little better than mepacrine, and its further development was conducted half-heartedly. Supplies of sontoquin were taken to America and Britain, and the chemical formula was determined. Clinical trials in the U.S.A. of one of its derivatives—chloroquin—showed that it had important advantages over mepacrine. Large-scale trials confirmed this; mass production was begun, and if the war had continued another year chloroquin would probably have displaced mepacrine as the main antimalarial in use among the American Forces. Its absorption, excretion, and distribution in the body resemble those of mepacrine, but it is colourless and does not stain the skin. It completely suppresses malignant tertian malarial infection, and adequate treatment of clinical attacks produces radical cure with complete elimination of the parasites from the body.[2] All signs of benign tertian infection are suppressed so long as administration of the drug continues, but when this ceases relapse usually occurs. In order to suppress malaria in soldiers it is necessary to give 0.1 g. mepacrine every day. The same results may be obtained by giving a single dose of 0.25 g. chloroquin weekly, which is important as reducing the time-consuming supervision of drug-administration to one-seventh of its previous level. In its general properties chloroquin challenges comparison with paludrine. One or other of these two compounds will almost certainly replace quinine and mepacrine; comparative tests in field trials are now taking place. Chloroquin has been tried on a much wider scale than has paludrine, but in many ways paludrine seems to be the more promising of the two.

Neither chloroquin nor paludrine can effect a radical cure of benign tertian malaria. All clinical symptoms disappear during administration of either drug, but on withdrawal a relapse usually appears sooner or later. It is hoped that radical cures will be brought about by means of another new American compound—SN 13276. In 1943 there was much controversy over the merits of pamaquin (plasmoquin). Earlier work by Sinton in India had suggested that a combined course of pamaquin and quinine was more effective than any other remedy in sterilizing benign tertian infections. Owing to the absence of controls this work was open to other interpretations, and in addition pamaquin was unpopular because it was apt to produce toxic reactions. The Malaria Committee of the Medical Research Council instituted comparative trials of pamaquin plus quinine and of mepacrine. These investigations were carried out by Kelleher and Thompson. They were statistically satisfactory, and the cases were followed up successfully. During the following six months about 30% of the patients treated with mepacrine relapsed, as against only 10% of those treated with pamaquin and quinine. This proof of the value of pamaquin was communicated to the American workers, who instituted a very extensive study of the plasmoquin (8-aminoquinoline) series of compounds to find a more active but less toxic derivative. The most promising compound to emerge from this study is SN 13276.



Therapeutically it is as active as pamaquin in avian infections but is less than half as toxic to laboratory animals. In man a thrice-daily dose of 20 mg. SN 13276 is as well tolerated as 10 mg. pamaquin given in the same way. Volunteers in an American prison who were infected with the virulent South-West Pacific strain of *P. vivax* and treated with full doses of the new compound (plus quinine) appear to have been completely freed from the infection. Further trials are being undertaken in the U.S.A. and in Britain; until these are completed it is not possible to make a true assessment.

[1] *British Medical Journal*, 1946, **1**, 919.
[2] *J. Amer. med. Ass.*, 1946, April 20.

The war has caused much suffering and destruction. It has, however, led to great improvements in our means for controlling and treating malaria. The scientific skill and the capital invested in the American wartime programme of malaria research will yield a good dividend of improved health in the years to come.

DISABLED PERSONS ACT, 1944

In last week's *Journal* Sir Reginald Watson-Jones drew attention to the recent Order of the Minister of Labour that the quota of disabled persons employed in industry shall be raised from 2% to 3%. Sir Reginald points out that this increases the number of disabled persons to be employed by 150,000. He also states that this is an answer to the criticism made in a recent leading article[1] that the "typical Civil Service approach to the problem . . . does not even achieve its object, since it merely means that the 2% will be made up of those with flat feet and subject to bronchitis." This statement was meant to illustrate one of the snags of the Disabled Persons Employment Act and to exemplify what, in fact, is happening apparently in many factories.

Under the Disabled Persons Act, 1944, a register of disabled persons is kept at the local offices of the Ministry of Labour and National Service. The main condition for registration is "a substantial handicap to employment and work which is likely to last for at least six months." All employers with 20 or more workers are required to employ a quota of registered disabled persons—formerly 2% and now 3% (incidentally, 2–3% of 20 is an awkward kind of person to employ). "An employer," to cite from the report of the B.M.A. Rehabilitation Committee,[2] "who has less than his quota may not take on a non-registered person without a special permit from the Minister, and a registered disabled person may not be discharged from his employment without reasonable cause if the discharge would bring the employer below his quota." Vacancies in certain occupations specially suited for disabled persons may not be filled by unregistered persons without a permit from the Minister. The larger industries have always found employment for disabled employees and have gone to much trouble to fit the job to the man. The variety of processes in a large industry facilitates this. In this country the small factory is the rule and the large factory the exception. The employer of, say, 250 men or fewer has a smaller variety of jobs to suit different forms of disablement and is, moreover, reluctant to have his labour controlled by a Government Department. He wants, in other words, to choose his own man for the job to be done. In order to avoid what he regards as the danger of having labour dumped on him the small employer has in many instances sought to satisfy his quota of disabled employees out of persons already working for him. For example, a man may be doing a whole-time job satisfactorily in spite of the disability of a hernia controlled by a truss: he can now qualify for the register. Such examples could be multiplied. By encouraging such workers to be registered the employer is doing something which is humanly understandable but does not contribute to the solution of a difficult problem, and once one employer in a big industrial area starts doing this other employers follow suit. This, at least, seems to be the experience of practitioners working in industrial areas, and it serves no purpose to blink the fact. The reaction of the Ministry of Labour is to increase the quota, and it presumably can go on increasing the quota until it achieves its aim. If we are to be fair to the employers we should recognize that their objection is not to the employment of disabled persons but to what they regard as possible interference with their selection of labour. There is, in fact, a problem, and we suggest that it will not be solved by stepping up the percentage of employed disabled persons.

The hard core of the problem is the employment of those whose disablement is so serious that economic employment is difficult to find. In one form of disability—namely, tuberculosis—a solution has been found in the Papworth Village Settlement. The Ministry of Labour has established the Disabled Persons Employment Corporation, which has now been in existence for a year. No doubt building and other obstacles have made it impossible for the Corporation to set up more than three factories in this time. It is, nevertheless, only a small beginning, and we may hope to see a more ambitious programme unfolded during the next twelve months. Such a development is surely the real solution to the real problem at a time when every available ounce of manpower is needed if this country is to hold its own in a world rapidly becoming industrialized. In the meanwhile we may note with satisfaction that Disablement Rehabilitation Officers are now receiving medical training in hospitals in London and in Manchester and that Regional Consultants have been appointed to supervise the results of their work. We would repeat the final sentence of the leading article in the *Journal* of June 29: "Perhaps industrial medicine will be judged more on its success or failure in placing individuals in industry than on any other aspect of its work." If a Rehabilitation Service is to succeed then it must be based on the principles formulated by the B.M.A.'s Rehabilitation Committee—namely, (1) Unity of control at the centre, (2) Unity of control in the region, (3) Continuity of care, (4) Effective liaison between general practitioner, hospital staff, and industrial medical officer, (5) Co-operation between medicine and industry, and (6) Close contact between hospitals and rehabilitation centres, convalescent homes and vocational training centres.

[1] *British Medical Journal*, 1946, 1, 990.
[2] *Supplement to the British Medical Journal*, 1946, 1, 189.

H. G. WELLS

One of the curious things about the tributes to H. G. Wells in the days after his death was the range of ages of the men who said how profoundly he had influenced those of their generation. Men in their early forties and men in their early seventies said the same thing. It was a remarkable testimony to a man who throughout a long life retained a youthful zest for living and learning and teaching. For Wells was a teacher as well as a prophet. He possessed that rare quality among teachers—an intense desire to make other people think things out for them-

selves, not to accept the edicts of authority without challenge. Wells was the great challenger.

The medical profession owes him much, if only for his insistence on the importance of biology. An educational system that neglected biology was for him an infuriating anachronism. It was symptomatic of his function as a teacher that *The Outline of History* was followed by *The Science of Life*: the story of man and then the story of living things. These two volumes—the second written in conjunction with his son, G. P. Wells, and Julian Huxley—gave the growing mind a "world picture." And for Wells any mind worth anything was always growing. He had little sympathy with the sterile pessimism of the twentieth century intellectual who croaked disaster with morbid relish. Yet he foresaw the possible eclipse of the species *Homo sapiens* if man lost his adaptability, and was aware of the parallel of the reptiles which lost their position as the foremost animals of the earth in the Mesozoic period.

In relation to the medical profession Wells was the antithesis of his contemporary, Bernard Shaw. "I do not like baiting medical men," he wrote in a preface to a book written by two doctors. "My friend G. B. Shaw does." His scientific training and profound interest in biology saved him from the facile attacks so often made on doctors by men whose gift for the pen is equalled by ignorance of that branch of applied biology which we call Medicine. Wells was aware of the ambivalent attitude of the sufferer to the healer. "It is in the nature of man," he wrote, "to be rebellious against his medical director." Yet he did not hesitate to criticize when he felt that criticism was called for. He thought the medical profession erred in being reluctant to listen to the unorthodox healer. "One other conspicuous fault the medical profession has, it does not advertise." By this he did not mean personal advertisement. "But I think that it might respond much more generously and effectively to the common desire to know what is being discovered, what is being practised and why." The alternative to this secret conspiracy on the part of the medical profession was, as Wells saw it, "a vast amount of misleading pseudo-information in the press that simply fertilizes the soil for the advertisements of patent specifics." And he added this to his store of wise sayings: "Communicative doctors make intelligent and helpful patients, and the more that treatment becomes collaboration the better for both practitioner and client." Wells suffered from diabetes, and it was characteristic of him that he identified himself with the interests of the Diabetic Association so that doctors and diabetics could collaborate the better. Already over 70, he took his D.Sc.Lond. with a thesis "On the quality of illusion in the continuity of the individual life in the higher metazoa, with particular reference to the species *Homo sapiens*."

"H.G.," as he was known to a multitude of friends, hated cant and pomp and reverence for authority. This extraordinary man saw himself as the ordinary man writ large—a man with a passionate desire that all other ordinary men should see life in all its intricacies with the same dazzling clarity with which he saw it.

CAVAL LIGATION FOR THROMBOPHLEBITIS

When pulmonary infarction follows thrombophlebitis in a lower extremity, it is always tempting to close the door to further embolism by femoral ligation. Since, however, it is usually not the frankly thrombosed limb that is the source of the pulmonary embolus but its apparently more normal fellow, it is wise, if ligation is done, to tie both femoral veins. Even this is not a final solution of the problem of embolus prevention, for often, at the time when operation is performed, the thrombotic process has already extended into the pelvis, and would require ligation of the common iliac, which Homans[1] has indeed advised and performed. Logically, the most satisfactory site of ligation for the prevention of embolism would be at a level above the confluence of the veins of the two lower limbs, but the surgeon's hand is stayed from caval ligation by fear of its danger. In cases of repeated infarction from puerperal pelvic thrombophlebitis the conflict between desire to establish caval occlusion and dread of its consequences is particularly sharp.

Lower,[2] in 1669, showed that experimental caval ligation is fatal if performed above the entry of the renal veins, compatible with life if performed below that level. In 1911 Pleasants[3] recorded 8 cases of caval ligation, and Ochsner and DeBakey,[4] in 1941, were able to comment on 48, performed chiefly for puerperal pelvic thrombophlebitis. Collins, Jones, and Nelson[5] reported 41 cases of pelvic thrombophlebitis proved at operation or at necropsy; in 8 of these the inferior vena cava was ligated, with one death. Gaston and Folsom[6] have described in detail two cases of thrombophlebitis of the lower extremities in which the inferior vena cava was successfully ligated. Both patients suffered from a mottled cyanosis and from venous distension of the lower limbs for a few days after operation, and from a pitting oedema of the legs. In the case of one patient, a woman of 49, the oedema resolved completely after four months; in the other, a man of 71 with calcified arteries in the lower limbs, a minimal oedema persisted for three months. In the second case, the pressure in the veins of the foot was measured at intervals after the ligation; on the third day after operation it was 380 mm. of water, falling to 300 on the fifteenth day.

It seems usual, therefore, for the collateral venous circulation to compensate for a ligated inferior vena cava. But the operation is likely to be regarded only as a last line of defence in patients who suffer from thrombophlebitis associated with frequently repeated pulmonary embolism. The selection of suitable patients remains a matter of the greatest difficulty, and opportunity for the justifiable performance of caval ligation will seldom arise. To sustain the patient during the dangerous early post-operative period, when the venous collaterals are strained to capacity, Gaston and Folsom recommend swathing of the feet, tight elastic bandaging of legs and thighs, the early use of oxygen, and adequate plasma replacement of the oedema fluid, which may be rapidly withdrawn from the circulation after the ligature is applied.

PERIPHERAL NERVES IN PERNICIOUS ANAEMIA

It is well known to neurologists that changes may occur in the peripheral nerves in cases of subacute combined cord degeneration, and that treatment may be followed by clear-cut clinical improvement. The extent of these

[1] *Surg. Gynec. Obstet.*, 1944, **79**, 70.
[2] *Tractatus de corde*, 1669, London.
[3] *Johns Hopk. Hosp. Reports*, 1911, **16**, 363.
[4] *New Engl. J. Med.*, 1941, **225**, 207.
[5] *Med. Surg. J.*, New Orleans, 1943, **95**, 375.
[6] *New Engl. J. Med.*, 1945, **233**, 229.

changes and the frequency of their occurrence have been debated. We read in the outstanding paper by J. S. R. Russell, F. E. Batten, and J. Collier[1] that there were severe peripheral nerve damage in one case, mild changes in two, but no abnormality in three others. J. G. Greenfield and E. A. Carmichael[2] removed portions of the anterior tibial nerves of living patients with pernicious anaemia, and found a reduction in the myelin sheaths, particularly around the large nerve fibres. Probably the earliest reports of such peripheral changes were those made by C. van Noorden[3] and by Eisenlohr.[4] A recent paper by J. B. Dynes and J. W. Norcross[5] has put the incidence of peripheral nervous lesions at about 23%. Still more recently, D. B. Foster[6] found degeneration of peripheral nerves in the post-mortem study of four fatal cases of subacute combined spinal cord disease, and in the biopsy examination of one further case. As might be expected, the changes were less in those cases in which liver extract had been administered. The last observation illustrates the great regenerative capacity of peripheral nerves. In this connexion we may also note the findings of C. Berry, C. Neumann, and J. C. Hinsey,[7] who found that in experimental cases injured nerve trunks were capable of regenerating normally, even in the presence of a severe thiamine deficiency.

PENICILLIN IN BRONCHIECTASIS

The success of resection of the lung for bronchiectasis confined to one or more lobes emphasizes the unsatisfactory nature of the treatment available for patients with bronchiectasis of less favourable distribution. It is not surprising, therefore, that the efficacy of penicillin in a variety of infections should have raised hopes that it might be of value in these cases. Preliminary work by Mutch and Rewell[8] has shown that inhalation of the mist produced from solutions of penicillin by a nebulizer can cause a bacteriostatic concentration of the drug in the blood. An even more effective concentration may be produced by this means at the surface of the respiratory mucosa. The results obtained by penicillin therapy in bronchiectasis may vary from case to case and even in favourable cases may not be long lasting. The bacterial flora of bronchiectatic cavities includes potentially pathogenic organisms insensitive to penicillin—for instance, *H. influenzae* and bacilli of the Friedländer group; and in chronic infections organisms previously sensitive may become penicillin-resistant. Moreover, intercurrent respiratory infections, epidemic or otherwise, might be expected to undo any good results obtained by penicillin treatment.

Bobrowitz, Edlin, Bassin, and Woolley[9] have recently published a preliminary report on the treatment of 12 patients with multilobar bronchiectasis. Penicillin was applied in a variety of ways: by intratracheal injection after local anaesthesia of the larynx, by the inhalation of nebulized solutions, by intramuscular injection, and by combinations of these methods. Intratracheal injection twice a day of a dose varying from 50,000 to 150,000 units, dissolved in 10 to 20 ml. of saline solution, resulted in a very high penicillin concentration in the sputum, and a concentration in the urine which indicated in one case that over 30% of the total dose had been absorbed, but a low and variable concentration in the blood. After inhalation the concentration in the sputum, though bacteriostatic, was much lower, and penicillin was demonstrated in the blood inconstantly and also at a much lower level than was found by Mutch and Rewell. The duration of treatment varied from four days for some of the patients treated by intratracheal injection to 115 days for one still under treatment by both this method and inhalation. The clinical results were claimed to be favourable. In 9 of the 10 patients whose sputum was foul before treatment the odour cleared up within a few days of beginning any form of penicillin therapy. It returned soon after the cessation of treatment in most of them, and in the two cases in which the sputum remained free from odour the follow-up was no more than one month. The volume of sputum was considerably reduced during treatment—in most instances by more than 50%. Bacteriologically the data are rather incomplete. As expected, the number of Gram-positive organisms and of pus cells diminished considerably during treatment, but usually increased again when treatment was discontinued. The authors recognize the frequently transient nature of the improvement observed but suggest that long-continued inhalation may help some chronic cases of bronchiectasis. They stress also the probable value of intratracheal penicillin as a preparation for lung resection in bronchiectasis.

An aspect of this problem which may merit further investigation is the possibility of help from penicillin in those cases of bronchial dilatation associated with pulmonary atelectasis, which have been shown to be reversible if the atelectasis can be relieved before the bronchi have been permanently damaged by infection. In any case which may fall into this group the result of intensive treatment by continuous postural drainage and breathing exercises must be observed before the condition is pronounced to be a permanent bronchiectasis. It may be found that penicillin by inhalation, or by intratracheal injection, is a valuable addition to the therapeutic measures available to the physician faced with a problem of this sort.

THE HOSPITAL "DOMESDAY BOOK"

The surveys of Hospital Services in England and Wales, which have lately been published in the form of Blue Books and have been reviewed from time to time in these columns, are summarized in a booklet issued by the Nuffield Provincial Hospitals Trust and printed at the Oxford University Press. It is not an easy task to condense into 20 short pages the work of ten teams of surveyors, but by representative quotations it is shown that the surveyors, all of them men experienced in hospital work, either on the clinical or on the administrative side, were virtually unanimous on three main defects in hospital services—namely, inadequate accommodation, shortage or ill-distribution of specialists, and lack of co-ordination. Not all the surveyors commit themselves to estimates of deficiency of beds in their areas, but, by applying to the three areas where no estimates are given the average of the other surveyors, the conclusion is reached that the total estimated deficiency for all classes of beds—acute general, maternity, tuberculosis, infectious diseases, and chronic sick—is approximately 98,000. If infectious disease beds are left out of the reckoning—and there are surpluses in many areas in this category—the existing total of 225,000 beds needs to be increased by more than 40%. The fact that available beds fall short by about one-third of the estimated total of accommodation required raises the question how far the State will be able to meet immediately the newly assured right of all the population to hospital treatment.

1 *Brain*, 1900, **23**, 39.
2 Ibid., 1935, **58**, 483.
3 *Charité-Ann.*, 1891, **16**, 217.
4 *Dtsch. med. Wschr.*, 1892, **18**, 1105.
5 *J. Amer. med. Ass.*, 1943, **122**, 586.
6 *Arch. Neurol. Psychiat.*, Chicago, 1945, **54**, 102.
7 *J. Neurophysiol.*, 1945, **8**, 315.
8 *Lancet*, 1945, **1**, 650.
9 *New Engl. J. Med.*, 1946, **234**, 141.

HEALTH IN H.M. PRISONS

The report of the Commissioners of Prisons and Directors of Convict Prisons for the years 1939–41* departs considerably from the form of its predecessors, for it covers a period of unprecedented difficulty and disturbance. As the summer of 1939 wore on the preparations for meeting enemy attack were amplified and the prison populations were moved from areas judged to be specially liable to attack. Over 2,000 prisoners and Borstal inmates, with the whole of their personal property and records, were transferred in three days almost without incident. When the expected air raids did not come and the normal inflow of prisoners continued, the drastic adjustments necessary had a disturbing effect on the discipline of some provincial prisons. The sudden influx, when the danger of invasion became acute in 1940, of many hundreds of alien internees and of persons detained under Regulation 18b presented problems which, in their novelty, multiplicity, and urgency, were for a time almost overwhelming. The prison staffs had to keep these persons separate from ordinary prisoners and apply different rules to them, to take care of large quantities of miscellaneous and sometimes valuable property, and also to struggle with the language difficulty. The air raids threw a heavy burden on all members of the staffs and tested their courage and endurance to the utmost. Liverpool prison had eight direct hits in one night and was evacuated, and few other prisons escaped damage and casualties. The behaviour of the prisoners locked in their cells was on the whole remarkably good. Against the inevitable feeling of helplessness was set the fact that a prison cell is one of the best forms of air-raid shelter. During the years under review thirty-nine men and four Borstal boys were killed by enemy action—a small proportion of a total population that was never below 8,000.

The Medical Commissioner, Dr. J. C. W. Methven, reports a sharp increase in the number of deaths in local prisons from natural causes. Of the twenty-seven deaths that occurred in 1939, most were caused by serious heart disease and cerebral haemorrhage. As he points out, many prisoners are suffering on admission from neglected chronic ailments, which are made worse by their method of living and which lower their resistance to acute illness. This being so, it is surprising that the death rate in prisons remains lower than that of the population as a whole. In 1941 five men committed suicide, but there were no special features about the cases and the Medical Commissioner believes that the increase in number was fortuitous.

The number of persons remanded to prison for mental observation has increased very considerably. Prison medical officers are well qualified for this work and welcome it, but it necessitates many hours of patient investigation. Dr. Methven repeats the request made in previous reports that magistrates' and justices' clerks should assist medical officers by sending the fullest particulars of the prisoner and their reasons for wanting a report. All too frequently they send nothing more than a request that the prisoner be kept under observation and a report submitted at the end of the remand period. The number of persons certified insane in local prisons shows a steady decrease, which in the Commissioner's opinion bears some relation to the increase in the number of cases remanded for mental observation. The number of prisoners in convict prisons treated in and out of hospital shows a steady decline, and he believes that payment for work and the greater interest shown in prison industries are largely responsible.

Special Problems

The Medical Commissioner regards it as unfortunate that statistics of the incidence of venereal disease and body infestation were not collected after 1925. They would have been invaluable during the early war years. They are now being collected, however, and will be published in future reports. Much attention is paid to venereal disease, and infected prisoners are carefully treated by modern methods. The number of women prisoners requiring treatment for infested heads has increased substantially, and the depleted nursing staffs have done much hard work for which they deserve praise.

Many medical activities unfortunately came to an end when war broke out. The medical department particularly felt the closing of the surgical unit at Wormwood Scrubs, where Mr. G. O. Chambers had performed an impressive list of operations in 1938–9. If possible, prisoners requiring surgical treatment were sent to outside hospitals; where this could not be done the small theatre at Lewes prison was used. Similarly, the psychiatric work at Wormwood Scrubs ceased with the transfer of Dr. W. H. de B. Hubert to the Army and Dr. H. T. P. Young to another prison. Some medical officers with special qualifications for psychiatry tried to assist prisoners, but in spite of their efforts psychiatric treatment virtually ceased. It has since been resumed, and Dr. Methven promises an account of the work in the next report.

When civilian rationing was introduced the whole scheme of prison dietary was recast; instead of an arrangement of set meals, a ration scale was drawn up for each prisoner in strict accordance with the civilian ration scale. The change was an improvement on the whole, for the addition to the rations of such adjuncts as curry powder, herbs, and dried fruit, or fresh fruit in season, enabled the cooks to serve the rations in more palatable form and with greater variation. Few complaints have been received from prisoners, and their general health and body weight have been maintained. The work of reconditioning and improving kitchens has gone ahead, and the standard of meals has improved.

* Cmd. 6820. 1946, London: H.M. Stationery Office, Pp. 180, 3s.

U.N.R.R.A. ACTIVITIES

Czech Psychiatrist's Study Tour

U.N.R.R.A. is sponsoring an effort to introduce into some European countries which were shut off from contact with Western medicine during the war a knowledge of recent medical progress. One example of this in the field of psychiatry is the recent visit to this country of a Czech psychiatrist and neurologist, Dr. Eugen Vencovsky, of Pilsen, who has been spending six weeks in Great Britain as the guest of U.N.R.R.A. studying the more advanced methods now employed in mental hospitals. From this country, under the same auspices, he has gone to Paris for two weeks and to Zurich for one. His time here was spent mostly at Crichton Royal, Dumfries, and at various mental hospitals and clinics, including the Maudsley, in and around London. He was also enabled to attend the recent annual meeting in Edinburgh of the Royal Medico-Psychological Association. Dr. Vencovsky has taken the opportunity of studying particularly recent methods of neurosurgery. He explains that with the invasion of Czechoslovakia early in 1939 all work of a research or experimental character in mental hospitals was forbidden, and psychiatrists, like others, were restricted to the routine medical service. They had no opportunity of extending their knowledge. Having studied developments in this country, Dr. Vencovsky is returning to acquaint his colleagues in Czechoslovakia with his observations.

Medical Help for Yugoslavia

A country in which U.N.R.R.A. has carried out some of its most intensive work is Yugoslavia, and the results of it are now visible in a lessening of child malnutrition and disease. Dr. Eleanor Singer, a young London practitioner who attached herself to U.N.R.R.A. two years ago for work in Yugoslavia, has lately returned on leave from Sarajevo and described some of her experiences at an U.N.R.R.A. press conference. She stated that the number of war orphans in Yugoslavia was computed at 88,000, and that there were in addition nearly half a million children who had lost one parent. In Bosnia rickets was almost universal, and to this was added dysentery and other intestinal infections, as well as tuberculosis—a state of affairs which, when combined with a shortage of foods, drugs, and beds, heavily weighted the scale against the sufferers. Much has already been done, however, to ameliorate the situation. In Sarajevo alone there are fifteen orphanages, and at these and at the clinics Yugoslavian girls and women are being trained particularly in maternal and infant care. Maternity homes have been established in which homeless women are taken a month before their confinement and kept for at least three months afterwards, during which time they are instructed in the care of their children and also, if illiterate, are given some primary education.

Correspondence

Health Service Bill

SIR,—The Health Service Bill, having passed its Third Reading in the House of Commons, can suffer no alterations of its text unless, as is improbable, the Lords pass amendments, which again have to secure the assent of the Commons. In these circumstances I submit that any further "negotiations" are futile. The sole decision to which the profession must come is whether or not they, as individuals, will accept service under the Act. I derive the most encouragement in the present position from the concluding words of the Minister (*Hansard*, July 26, 1946, columns 475–6). He said that "without the co-operation of the great medical profession the scheme is bound to fail," and he at last realized that "the House of Commons only passes Bills but it is the men and women outside who can make them living realities." He has seen the red light.

I have received during the last few days a statement from a surgical colleague in Canberra which gives the following information as regards the position of the medical profession in Australia, faced with exactly the same menace as confronts us now. He writes (July 7, 1946) that an Act embodying the socialist aspirations for a State Medical Service was passed some years ago by the Socialist Government. "Although passed, *it was never brought into operation* (the italics are mine), the most important reason being that the doctors woke up to the threat to their freedom and repudiated, and almost broke up, the B.M.A., which had negotiated an agreement, secretly, with the Government. . . . The reaction was such that a Royal Commission was appointed to consider the whole matter, but the Act was dropped without a report being published."

Another attempt was made later by indirect methods. "An Act was passed which gave the Minister power to enter into contracts with doctors to provide medical services. This power really made the Act an Enabling Act on which a socialized medical service could have been built up by regulation. The Victoria Branch of the B.M.A. challenged the Act and the High Court found it *ultra vires*."

The Australian Socialist Government is, I submit, much more firmly established than our present Socialist Government. The profession in Australia is, I further submit, less well organized than here. The B.M.A. has now enlisted practically the entire active profession in its membership, precisely because the profession wishes to present a united front in refusing to accept service in the conditions threatened by the Bill. The Representative Body has given the clearest lead on policy to the Council, and the fullest authority to the Chairman to make the statement which he is recorded as having made at the meeting: "Now we have come to the time when one side or the other has to give way. A conflict is inevitable. The matter is entirely in our own hands; there are no other doctors but doctors who are qualified. We are in the strongest possible position for ensuring that what we think is best for the public will be carried out."—I am, etc.,

House of Commons. E. GRAHAM LITTLE.

SIR,—May I give my support to the proposals outlined by Dr. Victor Russell (June 1, p. 846) and Flight-Lieut. J. H. Bergin (Aug. 3, p. 176)? The latter asks why has the New Zealand scheme never been really publicized. The answer must lie with the Medical Planning Committee who never thought fit to bring it to the notice of the profession as a whole.

B.M.A. policy towards the National Service Bill must have been formulated from information furnished by the canvass carried out by the Institute of Public Opinion. I well remember that no opportunity was given then for expressing views on an alternative medical service. It has been taken for granted all along that general practitioners were well satisfied with the panel system and would only accept some extension of this to include dependants. But, I ask, is this really so? Up to date most practitioners have earned as much and often much more than their panel fees by private practice, and are now coolly asked to give this up. Anyone with experience of colliery practice knows what this means—crowded surgeries in which it is impossible to practise even the rudiments of medicine. If this is the type of freedom envisaged by Principle A then I consider it largely illusory and not worth taking strong action against the Government for.

It has been forgotten that the capitation system was only accepted under protest in 1911 as the only workable makeshift to cover a section of the population who were unable to pay a doctor for attendance previously. I feel sure that we should all work better if we felt we were being paid for each item of service rendered, or in other words for the work we actually do. The duty of the Government is to assist the public to have the best medical attention regardless of lack of means, and this is assured by the New Zealand scheme without controlling the medical profession or the wage earner. If at this stage we refuse to work the National Service Bill and offer only private practice as an alternative we thereby hit the working man very hard. He will not be able to have attention unless we are prepared to give it gratuitously. There is nothing immoral in paying for what one gets, and to my mind it does ensure that the patient–doctor relationship is preserved in a manner quite impossible in the so-much-a-head system.

There is now to be a referendum or plebiscite of the profession. I call upon the B.M.A. Council to include in their questionary a request to every practitioner asking which he prefers: a capitation system, a salary, or payment per item of service as under the New Zealand scheme. Doctors unfamiliar with the latter have seen a similar scheme in a small way in payments for service under the Midwives' Act. So far I have not heard any adverse criticism of this scheme.—I am, etc.,

St. Asaph. A. H. HOLMES.

*** "General Practice in New Zealand" appeared in the *Supplement* of Nov. 18, 1944 (p. 115); "In New Zealand To-day" was published on Aug. 11, 1945 (p. 42); and "'Free Hospital' Experience in New Zealand" on Sept. 22, 1945 (p. 70).—ED., *B.M.J.*

SIR,—The National Health Bill has now had its Third Reading in the House of Commons. This means that there is no possible chance of any major modification, and it means a good deal else besides. First, that the British Medical Association, now led by my friend Dr. Guy Dain, has once more proved itself a dismal, useless failure; the Minister of Health quite obviously never intended to negotiate, was never interested in negotiation, and merely carried out the policy of his party. Given an adequate majority Pink Socialism dictates just as much as Red Russia. In the second place it means very considerable changes in the future. The number of general practitioners will have to be very considerably increased, both in order to cope with the great increase in calls on their time, and with the number of consultations and the number of certificates which will be required under the new Act. Thirdly, at least three times as many consultants and specialists will be required because everyone who is ill will demand a specialist's opinion, and no general practitioner will dare to open an abscess or treat a severe case of measles, because if anything should go wrong he will be attacked by the officials who supervise him.

Then again, the position in hospitals will change. The number of beds, the number of nurses, technicians, and workers of all types will need considerable expansion, for many more patients will be dealt with and many more forms will be required, as in peacetime Army or Navy medical services. It is proposed that nurses should work a 48-hour week, so that a huge increase in the number of nurses is foreshadowed, and it seems hardly probable that doctors will work longer than 48 hours a week. More than this, the practitioner who in the past has made £800 or £900 a year is to get more, but the able, hard-working, more highly qualified, more successful doctor who may have made as much as £3,500 is to get less, and can anyone be so blind as to fail to see that the incentive to work hard and to do good work is going to be removed. It means that doctors will be less efficient, will not be proud of their profession, will tend to resemble their peacetime counterpart in the Services, do as little medical work as possible, and that poorly. (I will not suggest for a moment that there are not very good men in the Services even in peacetime, but such men rapidly obtain executive positions and early promotion and cease to practise their profession.)

As a learned profession medicine is dead. Whether you like it or not it has been killed by a pink giant, but I am afraid that the practitioner of the future is going to be a poor stick. He will

work a service which is comparable to the telephone service, he will choose neither where to live, what type of practice to engage in, nor whom to work with. He will be selected for special education at the age of 11, he will have the benefit of a free education, he will probably speak B.B.C. English, he will call himself doctor even if he possesses the diploma M.R.C.S., and he will not resemble his predecessors in knowledge, interest in his patients, or capacity. He will work much shorter hours and will retire much sooner, and what his income may be will be of no moment; but medicine as a profession, as an honoured profession, as a learned profession, and as a profession which can offer great help to many friends among the public, is dead.

There is an old Army saying which is worthy of note: "What happens to your patient is of no importance providing your returns are correct."—I am, etc.,

Birmingham. K. DOUGLAS WILKINSON.

SIR,—Your correspondents, Drs. H. H. Sanguinetti and R. S. V. Marshall (Aug. 10, pp. 206 and 207), complain that the Council does not give a lead to the profession. This feeling is not confined to your two correspondents but seems to be fairly widespread among the general body of practitioners, and until recently has had in my opinion a certain amount of justification.

I feel, however, that the statement by Chairman of Council at the Annual Representative Meeting answers the complaint. It may be argued that this is not so as it does not state what action the Council intends to take *vis-à-vis* the Minister of Health, but what it does do is to put the issues clearly before us. The machinery of a democratic body such as the B.M.A. works from below up, and it is for its members, through their Representatives, to instruct the Council what to do. There is not much good leading until you are assured that those you lead are prepared to follow you. Divisional meetings are often poorly attended, and while the Representative is able to put forward at the Representative Meeting the views of those who do attend, how is he to gauge the views of those who are not there? It is for this reason that the plebiscite is being taken. It is to be remembered also that the whole of our profession (not only the B.M.A., which comprises the large majority) is involved, and that it is the Negotiating Committee and not the Council who will receive and act on *our* instructions.

One significant statement was made at the Annual Representative Meeting by Chairman of Council. Unfortunately it was not reported in your otherwise excellent and accurate account of the proceedings. Dr. Dain said that he felt it had been a mistake to discuss the question of compensation with the Minister even though it had been clearly stated it was being done "without prejudice." Here, to me at any rate, appears to be the lead for which your correspondents are looking.—I am, etc.,

London, S.E.3. WM. GUNN.

The Plebiscite

SIR,—Dr. E. D. Broster's letter (Aug. 10, p. 206) is most timely and offers a constructive way in which to approach the problem of the new Health Service. The profession must keep before them the general principle underlying the scheme—the principle of direction, regimentation, and official interference throughout one's professional life.

The scheme should be rejected completely and utterly for one reason and one only—that the whole conception of it is alien to our British ideas of freedom and fair play.—I am, etc.,

London, N.W.10. R. M. AYTON-ORMSTON.

SIR,—As one of those directly responsible for the motion to have a referendum (as I prefer to call it) I would like to answer Dr. E. D. Broster's letter (Aug. 10, p. 206). The reason why a referendum is necessary soon is that the Council have no longer a mandate to negotiate. They *had* a mandate to negotiate in the general framework of the Bill to try to get it altered so as to conform with the principles which were considered essential to the freedom of the profession. There were no negotiations; the Minister would not negotiate. There were discussions, but these did not make the Minister amend his Bill in any essential way.

The present position is that the Bill is as good as law, and it contains many things that the majority of the profession apparently do not like. The Minister will shortly proceed to fill in the padding of the Bill, namely the terms and regulations, and the Council has no mandate to negotiate upon these from the profession. Dr. Broster will find that it was decided that a referendum should be taken soon on the simple issue as to whether there should or should not be negotiations with the Minister on terms and regulations. It is too early yet to ask whether the profession is going to *refuse service*, but a refusal to *negotiate* if carried to its logical conclusion would mean this.—I am, etc.,

Cambridge. ALEX. BROWN.

SIR,—In his recent statement the Chairman of Council makes it clear that the opinion of all registered medical practitioners will be consulted concerning the question as to whether or not further negotiations should take place with the Minister. I consider that the answer to this question might be misleading. Many practitioners in favour of the new Bill might nevertheless answer in the negative. In view of the Association's attitude to the Bill and its cumbersome statement of irrelevant principles they might desire that the negotiations concerning the working of the new scheme should be left to other bodies.—I am, etc.,

King's Langley. P. DUPRÉ.

Government Salaried Service

SIR,—The letter of Dr. C. F. C. Parkinson (Aug. 10, p. 208) is extremely apposite. The brief experience of those of us who left the E.M.S. after three months of war to volunteer for one of the Services was enough to impress upon us for all time that the Ministry of Health, as agents of the Treasury in their financial dealings with doctors, are absolutely unscrupulous and capable of even the shabbiest and most petty forms of dishonesty for no better reason than that advisers can apparently be found to assure them that doctors will stand for this kind of treatment.

Dr. Parkinson omits only one detail of this shameful and discreditable story: even during the first three months of the war, while the newly drafted E.M.S. medical officers were still organizing their sector hospitals, a circular reached them from some minor Machiavelli in the Ministry informing them that at the time of their engagement (some six weeks or so before, on the outbreak of war) the Ministry had not appreciated that they were under contract to their parent hospital; and that since the Ministry would not dream of interfering with this contract (which in the case of my own teaching hospital had never existed at all, there being no salary for resident appointments before the war) their later engagement at £350 per annum in the E.M.S. should be considered as cancelled.

The intended effect of this one-sided repudiation of a freely negotiated contract was an economy: the saving of all salaries to junior E.M.S. doctors while their services were retained free by misrepresenting their previous agreement with their own hospital. The effect actually produced was an outburst of incredulous indignation so unexpected and alarming to the Ministry that an immediate retreat was considered expedient. This took the form of a second circular letter naïvely dismissing the first as an error. But how temporary was this enforced return to straight dealing, how prompt, whole-hearted, and successful was the subsequent official counter-attack designed to evade both spirit and letter of the original contract, can be judged from the facts in Dr. Parkinson's letter.

The moral of this sordid tale is simply that, since doctors are not disposed to strike, they owe it to the public as well as to themselves to ensure that no further opportunities are given to the Ministry of Health to dishonour freely negotiated agreements.—I am, etc.,

Bognor Regis. D. STAFFORD-CLARK.

Scotland's Health Service

SIR,—Mr. C. W. Key, Parliamentary Secretary to the Ministry of Health, declares: "The powers the Minister has are all powers of a kind which has been enjoyed by Ministers in relation to medical and other benefits under the National Insurance scheme." Yet the principle of the old Act with its sharing of responsibility is not identical with that of the new Act. The people are generally opposed to the original scheme upon at least three grounds: (1) the personal relation between patient and doctor; (2) want of modern scientific benefits—e.g., *x* rays; (3) official callousness and inexcusable delays.

The drafting of the new Scottish Act should not be carried out either by English or Scottish officials, so long out of vital touch with the clinical problems that matter, but by a special committee of Scottish surgeons and physicians from the four Universities and under the auspices of the Principal of Edinburgh University. This committee would ensure: (1) Free choice of doctor, in or out the scheme. (2) A profession trained by anatomical and surgical experts to operate upon their own patients (not permissible under the English Act). (3) Complete external and internal diagnosis and treatment appropriate to every Scots patient, peasant or millionaire. Extra benefits to the patient to be effectively provided by the officials concerned. (4) Abolition of backstairs and petticoat methods of control. (5) Liberty of the young doctor to buy a house and settle whereever he likes to earn his livelihood. (6) Triennial or quinquennial revisions of the Act.

The chief supporters of central control are from members of the profession who have not handled a clinical case for years. They never realize it is the patient who calls in the doctor, and expects him, like Nelson, to do his duty. He entrusts his life and the lives of his family to a personality. A cogwheel routinist poorly trained and unconcerned except to fill up pretty forms is absolutely no use to the Scots patient. He will expect in the Scottish Act to see some approximation to Sir Hartley Shawcross's dictum: The individual must transcend the State. To secure this, two methods are essential: (1) a return to the individual visit as before 1912; (2) a distinction between Sherlock Holmes the clinician, and Louis Pasteur the administrator. Each must be accorded his proper place in the Scottish National Health Acts of the future, but Louis must serve Sherlock, not control him. The Secretary of State for Scotland has the chance of a lifetime to provide socialism to our people.—I am, etc.

Glasgow. A. TURNBULL.

Emergency Bed Service

SIR,—The many London doctors who made use of the Service during the war must often have wondered just how long it would continue to work only by day. It was of course always intended that a 24-hour service should be provided, and prior to the war this was done. Wartime difficulties, however, made this impossible to maintain, and for many years the Service has closed at 10 p.m. Indeed, at one time it had to close at "blackout" as the windows and curtains had been blown away.

Now that it is possible to obtain the necessary staff and to run the office free from enemy interference the committee have decided to resume the full 24-hour service, and from 9 a.m. on September 1 it will be available to doctors day and night throughout the year.

The Service continues to deal with all acute and urgent cases, excluding fevers, but owing to the prevailing shortage of beds in London it often takes considerably longer to find a bed than it did before the war, and it is quite impossible to deal with a case not in absolute need of immediate admission. Subject to these limitations every possible assistance will be given to doctors.—I am, etc.,

London, E.C.2. R. E. PEERS,
Secretary,
Voluntary Hospitals Emergency Bed Service.

The Outbreak of Smallpox in Middlesex, 1944

SIR,—The report on the outbreak of smallpox in Middlesex in Feb., 1944, by Drs. W. H. Bradley, J. O. F. Davies, and J. A. Durante (Aug. 10, p. 194), is very welcome even though a little belated. It affords a striking illustration of the efficacy of modern methods of dealing with an outbreak of highly virulent smallpox, even when the circumstances appear to be highly favourable for spread, without recourse to mass vaccination of the general population. Much credit is due to the medical authorities who dealt with the outbreak so efficiently and successfully. One only wishes the report could have been made public earlier so that it could have been an encouragement to other authorities, where somewhat similar outbreaks have occurred, to refrain from rushing into mass-vaccination campaigns with all the attendant risks to life and health which such campaigns inevitably entail.

There are certain aspects of the outbreak as detailed in the report which deserve stressing:

(1) The initial case, the cause of the outbreak, was a soldier arriving from Gibraltar. He had been well vaccinated in infancy and successfully revaccinated in Sept., 1942, i.e., less than eighteen months previously. The attack, as we should expect, was highly modified, and the case was diagnosed as chicken-pox. We are not told if the case was seen by any doctor with previous experience of smallpox, but in view of the serious consequences likely to follow any mistake in diagnosis it certainly seems desirable that any case presenting symptoms which might possibly be smallpox, and especially in soldiers returning from the East, should be referred to an expert or, if this is not feasible, should at least be isolated effectively. In this case we are told that the patient was allowed to be up and about, visited other parts of the hospital, and had his hair cut by a barber in company with a number of other patients.

(2) The failure of successful revaccination to protect completely for even eighteen months is certainly surprising and rather disconcerting. It illustrates the limitations of vaccination and affords a warning against over-confidence in its efficacy.

(3) Four out of the eleven cases in the outbreak occurred in nurses, and one of these, who had never been vaccinated, died. The other three had not been vaccinated since childhood. This certainly suggests that all nurses, like all doctors, ought to be protected as far as possible by repeated vaccinations. Case 11 makes the same observation applicable to ambulance drivers.

(4) At the same time it is noteworthy that among those members of the nursing staff who had never been vaccinated there were seven who did not contract the disease although they were brought closely in contact with it. This supports the view that smallpox does not "pick out" the unvaccinated to the extent that used to be taught at one time.

(5) In spite of the failure of comparatively recent vaccination to protect the initial case the outbreak affords evidence of the power of vaccination, even though performed in infancy many years before, to modify an attack and make it milder.

(6) The outbreak also supports the contention that vaccination, even though only performed in the incubation period, does diminish the severity of an attack.

Admittedly, the number of cases dealt with in the outbreak was too small to justify any very dogmatic assumptions.—I am, etc.,

Leicester. C. KILLICK MILLARD.

Socialism and the Pay-bed

SIR,—I have read the letters of Mr. H. I. Deitch (July 27, p. 139) and of others on this subject and agree entirely with many points they raised. I should be the last to suggest that any person who needs a private ward should not have one; no doubt this will one day be possible on medical grounds. At the same time I do not see why those who wish to pay for such wards should have to submit to interference with the use they make of their money. To attempt such interference smacks of National Socialism on the German model.

I do not understand how Mr. Deitch is able to exclude any sick person from hospital however excellent his reasons. As far as I know all sick poor may demand hospital care if they wish. The measures he took seem to be admirable, but not all superintendents are as resolute in defending their staffs and the other patients from contact with objectionable people. It is unfortunately true that in some places local politics colour these matters quite a lot. Many doctors, and even schoolmasters, will say that it is professionally advantageous to have politics of the colour to please one's employers. This is so dangerous, as we have countless examples in the shape of revolutionary France, Nazi Germany, Communist Russia, and so on. In each and every case the mixing of politics with professional or technical activities has proved harmful and productive of inefficiency.

I did not suggest, and I do not believe, that sensitive and refined people are only found in one class. I have been a patient in private and public wards and do not mind either, provided that obnoxious behaviour can be immediately checked without fear of any political repercussions.—I am, etc.,

Colchester. G. C. PETHER.

SIR,—If your correspondent, Dr. Ian C. Gilliland (Aug. 10, p. 211), could know the chorus of approval reaching me from far and near which has greeted my original letter (June 22, p. 968) on this subject he would be even more "surprised." I shall not myself answer his questions about the definition of desirable genes and their transmissibility. If he sincerely wishes information on these subjects there are numerous works by accredited authors which will supply his need much more fully than would be possible in a short letter. The following may

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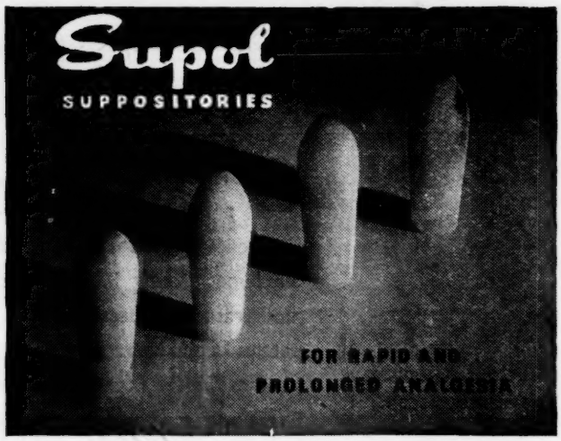

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be recommended: *Applied Eugenics,* Popenoe and Johnson (Macmillan); *World Population,* Carr-Saunders (Oxford); *Introduction to Human Genetics,* Fraser Roberts (Oxford Medical Publications).

However, I must in self-defence point out that he has craftily transferred the word "acquired" from paragraph 2 of my letter to the last paragraph, thereby making it appear that I have suggested that acquired characters are transmissible—a most evident pitfall which even I should know how to circumvent. On this subject too there is a voluminous and easily available literature. Prof. Arthur Thomson's book *Heredity* contains an admirable summing up of the evidence for and against such transmissibility.

Again, Dr. Gilliland writes: "The contention of the whole-time medical officers of the Middlesex County Council is that privacy should be obtainable on medical grounds." Nobody would question this, but this was not the contention of these medical officers. Their contention was that "patients should receive extra privacy, etc., *solely* on medical grounds." The word "solely" has been conveniently omitted. It is the essence of the question. A sound case would not require bolstering up by such tricks.

This correspondence is degenerating to the plane of personalities and obloquy, and that is not owing to any disagreement on the subject of genetics, which, though a comparatively new science, is sufficiently established for our present elementary needs. The anger of my critics is aroused because I have dared to touch with hands irreverent the socialist shrine, which of course I should have known to be sacrosanct. Let me therefore in an attempt to retrieve the discussion from mud-slinging briefly reaffirm the basic principle for which my first letter was written. This principle, the premise from which all legislation would in my opinion do well to start, is the effect of such legislation on the quality of future human stocks. The discovery, preservation, encouragement, and propagation of our best stocks, wherever found, without reference to financial or social status—that "real aristocracy of natural intellectual endowment, character, rectitude, social desirability, and service (not the class usually referred to as aristocrats, who may or may not be desirable eugenic types)"—is surely an objective on which all political parties could unite. Such enlightened policy would be of inestimable service to society in the near future and in remote generations would be capable of producing in the race a quality undreamed of by the many. Moreover, the higher the general standard of the population the more likely is it to produce those exceptional variants on whom the direction and advancement of the community so largely devolves. It is almost certain that the human faculties have not reached anything approaching their highest expression and greatest development, even with such outstanding men as Shakespeare, Isaac Newton, Darwin, Einstein, etc. It is also certain that many factors—e.g., misguided political adventures (not confined to any one party)—perpetually weigh the scales in the opposite direction. Of this dysgenic action numerous examples will occur to everybody, but among them (in order to avoid home politics) may be instanced the elimination and destruction of intellectuals by the Germans in the over-run countries, a similar process in the early days of the Soviet Union, and of course war itself. Legislation leading to betterment of humanity is good, and legislation leading to deterioration is bad.

If these simple truths and ideals could be grasped by politicians, and better still by the community, would it be too much to hope that a complete re-orientation of political objectives might result? It is to a consideration of these facts that one would presume to invite the profession in order to urge their leadership in this biological matter so easily grasped by ourselves, so little understood by the general public. Unless they do so the serious danger of racial deterioration faces us.

And where does "Socialism and the Pay-bed" come in in reference to all this? Simply that the proposed rules for the use of the pay-bed constitute just one of many political pin-pricks, some large, some small, militating against the interests of the better eugenic types which I have previously defined and leading to their discouragement. (On the differential birth rate much has been written. The Galton lecture by Mr. C. J. Bond can be read with profit and a précis is printed in the *Journal,* 1928, **1**, 315.) Though my critic complains that the connexion between the two is not evident it will be clear to the majority, and a little unbiased reflection should clarify it for him also. To the above attitude the terms "snobbishness" and "bigoted" seem singularly inappropriate. Concerning itself solely with the interests of future generations it appears completely altruistic and unselfish and is indeed the truest form of service to the community, far transcending that doctrinaire socialism which is admittedly devoted to the narrow interests of a single class and which as at present practised is, I repeat, dysgenic and antisocial in many of its aspects.—I am, etc.,

Grasmere JAS. B. MACALPINE.

⁂ This correspondence is now closed.—ED., *B.M.J.*

Nutrition of Far Eastern Internees

SIR,—I think I can assure Dr. C. Romer (Aug. 3, p. 176) that nocturnal diuresis among Far East internees was not due to any specific factor in rice. In the summer of 1940 at an officers' camp in Germany the same phenomenon was noticeable, beginning immediately after arrival at a permanent camp following a rather tiring march of two weeks on very poor rations, and continuing in most cases until the arrival of Red Cross parcels and a consequent increase in protein intake. In this case the diuresis was attributed by the P.O.W.s variously to the potatoes or the watery vegetable soup, which, with bread, constituted most of the diet; while I do not think that rice was ever included. Stools also were very bulky.

In referring to a low protein intake it is perhaps worth noting that in the first six weeks of this poor diet there were three clinical cases of acute attacks of gout (in each case in men who had previously had gout) to the intense indignation of the victims, who felt that it was an unfair imposition in the circumstances. It is only fair to add that Bavarian beer was available.—I am, etc.,

Hereford. A. F. STALLARD.

Shock Treatment of Bronchial Asthma

SIR,—I am in complete agreement with Dr. E. M. Fraenkel's remarks (Aug. 3, p. 174) on the shock treatment of bronchial asthma. I have paid particular attention to the treatment of this condition for some considerable time and I have come to the conclusion that it is one of the diseases which demands individual attention and analysis more, perhaps, than any other and that it is most inadvisable to dogmatize on the merits of any particular form of treatment. It has been my experience that a method of treatment which might give very satisfactory results in one patient might prove equally disappointing in another.—I am, etc.,

London, W.1. E. S. FENNELL.

Reiter's Disease

SIR,—I have read with interest the article on Reiter's disease by Flight-Lieut. W. P. U. Jackson (Aug. 10, p. 197). While in charge of cases of bacillary dysentery in the Middle East I encountered a combination of polyarthritis, urethritis, and conjunctivitis more than once in patients admitted with acute diarrhoea and showing a bacillary exudate on microscopical examination of their stools. As severe diarrhoea is apparently a feature of Reiter's disease it must be difficult at times to distinguish this from bacillary dysentery complicated by the same triad of symptoms.—I am, etc.,

Grays, Essex. R. N. HERSON.

SIR,—In the *Journal* of Aug. 10 (pp. 197 and 199) are two notes on Reiter's disease by Flight.-Lieut. W. P. U. Jackson and Dr. F. Wrigley. These authors state that the aetiology of this disease is unknown.

Actually there is a very similar syndrome—characterized by conjunctivitis or iritis, arthritis, and urethritis, often associated with colitis (although the colitis may be absent)—which constitutes a well-known but uncommon sequel to bacillary dysentery, generally of the Shiga or Flexner type. This post-dysenteric syndrome may begin two or three months after an attack of dysentery.

In my experience a Service patient was sent to the laboratory for examination of the discharge from his urethra. We observed

that he had conjunctivitis, so this discharge was examined also. Both results were negative so far as venereal disease was concerned. The patient later developed arthritis. Much later his history was inquired into. Then it was found that he had been discharged "cured" from a hospital after being an in-patient with an attack of "dysentery" some three months previous to visiting us with the urethral discharge.

It is easy to miss pertinent items of medical history when the patient presents himself (or herself) with symptoms that have a steep venereal "slant."—I am, etc.,

Epping. FRANK MARSH.

Ligature of the Cord

SIR,—There appeared in your columns a few months ago a number of letters on ligature of the cord. Your correspondents emphasized the necessity for double ligature. It is interesting, therefore, to note what may happen when the parturient woman ignores all the complicated modern machinery of antenatal and natal care and leaves it all to Nature. At one time or another most practitioners will have been called to a woman in labour where pregnancy has been concealed and where no preparations of any kind have been made, and has perforce to be midwife as well as accoucheur. Few, however, can have had the experience of such detachment as I have found in one family in my practice.

About 6 a.m. on Feb. 13, 1943, I was called to the house of P. X., a legless ex-soldier, who with his aged and bedridden wife occupied the ground floor only of his house. The upstair rooms, unused and uncared-for for years, were thick with undisturbed dust and dirt. In the midst of all this his grand-daughter A. X., an unmarried girl of 20, had delivered herself of a fine boy some hours before. The placenta had been expelled and the cord had been torn across about 2 in. (5 cm.) from the umbilicus, and no ligature had been applied. There was no bleeding and the baby was vigorous and showed no sign of past loss of blood. The perineum was intact. No preparations of any kind had been made. Mother and baby were sent into hospital and the puerperium was uneventful.

On Oct. 8, 1944, I was called to the house of T. X., father of the last case (A. X.). His newly married second wife, G. X., had given birth to a daughter. The baby was vigorous. In this case, though the placenta had been expelled, the cord had not been tied. No preparations of any kind had been made, and both mother and child were sent to hospital, where the puerperium was uneventful.

On April 8, 1946, Mrs. K. Y., a married daughter of T. X., was delivered under exactly the same conditions. Her husband knocked up my assistant, requesting an ambulance to take her to hospital.

On April 15, 1946, at 6.40 a.m., I was again called to A. X., who was reported to have a retained placenta. She had delivered herself unattended about 11 p.m. the previous night and had divided and tied the cord with tape. Even the placenta had been expelled when I arrived. There was a good contraction, and no evidence of haemorrhage. Again there were no preparations, and mother and baby were sent to hospital.

It is difficult to understand why these three women should have flouted accepted practice and braved my, by no means voiceless, horror and indignation. They should have suffered from toxaemia of pregnancy, disproportion, malposition, obstructed labour, torn perineum, puerperal haemorrhage, puerperal sepsis, and possibly a number of other unpleasant complications. The infants should have been asphyxiated or died from haemorrhage from the cord. Orthodox obstetricians will understand how disappointed I felt to find that there was not even a minute tear of the perineum.—I am, etc.,

Preston. F. M. ROSE.

The "Intractable" Vesico-vaginal Fistula

SIR,—Surely Drs. O. S. Heyns and P. Keen (July 20, p. 99) are reading more in Prof. Chassar Moir's letter (May 18, 1946) than he actually wrote? He deplored undue pessimism and unnecessary resort to transplantation of ureters, and both writers agree with him. But it is surely unjustifiable to assume that because Prof. Moir has had 100% success in repair by the vaginal route he therefore believes that all cases can be cured so. I am unable to read any such suggestion into his letter.

If figures are to be quoted, however, let us remember that percentages are misleading in small series and that "difficulty" is as hard to assess as pain. While difficulty may vary from country to country it is probable that in a series of thirty or more unselected cases in any one country the difficulties would be comparable with other such series in the same country. The larger the series the more likely are the cases to be selected, though not by the surgeon himself but by his friends who send him their problems. How cases may on the average vary from country to country there must be few surgeons who can say. I have felt that most of my cases, all seen in Madras, were very difficult, but I am unable to say how they compare with those in the Bantu. I feel that sufficient information is rarely offered when series of cases are presented. Thus, Dr. Keen has transplanted eight cases in ten years, and Murray (1943), has transplanted some sixty cases over a number of years. But what we need to know is what percentages are these of all the cases seen? Again, Dr. Heyns has transplanted "in some cases of fistula," but where repair *per vaginam* has been impossible, so, frequently, has transplantation as well. Where transplantation has been possible repair *per vaginam* could be effected "without difficulty." Thus he finds that with an inoperable fistula transplantation is very often impossible too. But when does he regard a fistula as inoperable? I regard them as inoperable when about half the lower border of the fistula consists of the periosteum of the pubis. I have hitherto needed to do only six transplantations, and none was difficult. But these were not the cases which had the most scarring in the vagina (and presumably the most adhesions in the pelvis): they were the cases where the fistula happened to be low and bounded by bone, and without urethras. High fistulae, with dense scarring in the vagina, no recognizable cervices, and quite immobile—and far more likely to have had pelvic peritonitis—were all repaired from below.

I think it is sufficiently obvious that we are talking to some extent at cross purposes, and I therefore suggest that we present our figures on a definite plan. This will clear up what difficulties can be cleared up, and as for assessing degrees of difficulty we must be content to wait until we can see cases in other countries. It is no great matter if one surgeon has 5% more cures than another; what does matter is that difficulties in understanding one another should be reduced as far as possible.

Dr. Heyns makes the point that loss of vaginal tissue and the urethra are the complications which militated most against success. I have elsewhere (Thomas, 1945) classified fistulae as juxta-cervical, mid-vaginal, or juxta-urethral, and shown that the high juxta-cervical fistulae and the mid-vaginal are more easily repaired than the low juxta-urethral, although they may be extremely difficult. The following suggestions are made with this point in mind, and are illustrated by figures from my own series.

The total numbers of fistulae seen, excluding those due to cancer and lymphogranuloma, may be set out as follows:

TABLE I

	J.C.	M.V.	J.U.	Total
Cases seen	22	6	30	58
Obstetric	21	6	30	57
Radium burn	1	—	—	1
Surgical trauma	—	—	—	—
Totals	22	6	30	58
Refused treatment	1	—	3	4
Submitted to treatment	21	6	27	54
Repaired by vaginal route	20	6	17	43
Failures	1	—	10	11

TABLE II.—*Analysis of Failures*

J.C.	Pulled out her catheter, and had residual pin-point fistula, but did not return	1
J.U.	Refused second operation	1
	Refused transplantation of second ureter after successful first stage	1
	Refused any transplantation	1
	Successful double transplantation	3
	Death from transplantation	2
	Successful colpocleisis	1
	Complete failure (inoperable V.V.F.) and failed R.V.F.	1
		11

1. To arrive at percentages (and one must admit they have much the same attraction as have those of Wisden, and perhaps about the same practical value) we must in assessing the "cure rate" neglect patients who refuse a second operation when they might well have been cured by one, and of course those who refuse treatment at all. Of 54 cases, one refused a second vaginal operation, and another (the J.C. case) failed to return. Thus of 52 cases 43 were repaired: 82%.

2. To assess the "total relief rate" we must add to the repairs

those relieved by transplantation or colpocleisis. The cases refusing relief operations should not be included. Thus, of 54 cases, 4 refused either a second vaginal operation, or a relief operation, leaving 50 cases. Of these, 43 were repaired, 3 underwent successful transplantation, and 1 colpocleisis, giving a total of 47 cured or relieved, or 94%.

3. Percentage of cases relieved only, out of the total of those relieved and cured:

$$\frac{\text{cases only relieved} \times 100}{\text{cases cured and relieved}} = \frac{4 \times 100}{47} = 8.5\%$$

4. Cases complicated by the presence of other fistulae should be recorded as it may give some idea of the severity of the condition. Three cases had an associated uretero-vaginal fistula: in each the V.V.F. was repaired; in one a nephrectomy was necessary; and in the other two the offending ureter was transplanted into the sigmoid. The three cases were complicated by a recto-vaginal fistula: one had both fistulae repaired, another had the R.V.F. repaired, and both ureters transplanted (V.V.F. inoperable), and the third had an inoperable V.V.F. in which several attempts to cure the R.V.F. failed.

5. One's criterion of inoperability and how many the series included (3 cases).

6. Number of cases treated previously operated upon elsewhere and how often: 11—9 once, 1 twice, and 1 four times. These include two of my failures and nine repairs.

7. Successful cases which required more than one attempt: one in this series had two vaginal operations; all the other successes healing at my first attempt.

Would not records on these lines do much to enable workers to avoid avoidable misunderstanding? It is doubtful if further information could usefully be offered, short of supplying full case notes.—I am, etc.,

Bournemouth. G. BENION THOMAS.

REFERENCES

Murray, H. E. (1943). *J. Obstet. Gynaec. Brit. Emp.*, **50**, 347.
Thomas, G. B. (1945). Ibid., **52**, 262.

Lice in Hospital

SIR,—After six years spent with a relatively non-verminous military population it is depressing to realize that one's own people can be indifferent to the louse. This realization focused attention on the prevalence of lice, and the noting of verminous patients on admission to hospital during the past two years makes it possible to deal with true figures. Patients examined have all suffered from notifiable disease and may be considered a fair cross-section of the Lanarkshire population, since all grades of society find themselves at times in an isolation hospital. No distinction was drawn between head and body lice, since it is reasonable to regard these as the same insect. Nits have been taken as evidence of lousiness.

Tabulation of the available figures show:

TABLE A.—*Gross Figures: Louse Infestation*

Year	Total Admissions	Verminous	Clean	% Verminous
1944	1,983	566	1,417	29%
1945	1,895	670	1,225	35%
1946 (Jan. and Feb.) ..	394	119	275	30%
Total	4,272	1,355	2,917	32%

It would appear that approximately 1 in 3 of the patients admitted were lousy on leaving their homes.

TABLE B.—*Age and Sex Incidence* (1944, 1945, 1946, *Jan. and Feb.*)

Sex	Age Group	Verminous	Clean	% Verminous
Males	0– 4·9	130	413	24%
	5–13·9	253	559	31%
	14–17·9	22	104	18%
	18+	21	529	4%
Females	0– 4·9	142	303	32%
	5–13·9	494	375	57%
	14–17·9	63	54	54%
	18+	230	580	28%
Total		1,355	2,917	32%

The relatively high incidence in children of both sexes in the pre-school age group suggests neglect on the part of parents, and the incidence among adult women indicates a lack of personal cleanliness which cannot but be reflected on their children. The female figures are all bad, and it is depressing to note the condition of school-age children (males 31%, females 57%). These figures seem to demonstrate a certain futility in the present methods of eradicating lice in schools. They indicate, too, the chance a clean child has of acquiring lice. Lousiness among adolescent girls at as high a rate as 54% is an ill augury for the mothers of the future. The reasonable figures for adult males cannot be due to lack of available infection, but undoubtedly short cropping of male hair creates an uncomfortable environment for the louse just as the apparently untouchable and unwashable "perm" provides a secure retreat. When the problem is considered honestly there is no real reason why anybody in this country should harbour lice, and it seems apparent that apathy, indifference, and laziness are the real reasons why British lice still flourish.

In the County Hospital, Motherwell, dichlordiphenyltrichlorethane (D.D.T.) as a 5% dust in talc has been used to control these vermin. A simple dusting with the powder on admission suffices to kill the lice, and as nits hatch out the still effective powder destroys the nymphs. No toxic effects have been observed, and in these days of nursing shortage D.D.T. saves much time and obviates embarrassing scenes with female patients. The good uses of D.D.T. have been seen on a large scale abroad, and there seems no reason why the 5% dust, applied perhaps once a month to school-children, should not reduce the present verminous condition to infinitesimal proportions. D.D.T., being stable and effective for several weeks, should take care of renewed infestation in the home. In schools the dust could be applied rapidly, economically, and without offence, by the use of a dust-gun.—I am, etc.,

Weston-super-Mare. JAMES MACRAE.

Rheumatic Fever

SIR,—When Dr. H. S. Barber reads Dr. K. Douglas Wilkinson's letter (Aug. 3, p. 174) I hope he will not feel too crushed and discouraged. Nearly 20 years ago, when I was doing some work on allergy, the late Dr. Oriel, whose work on the biochemical aspect of allergy was well known, told me that he had evidence which convinced him that the articular symptoms of acute rheumatism were an allergic response.

Dr. Wilkinson wants Dr. Barber to explain the response of acute rheumatism to the salicylates. Asthma, which I prefer to regard as a syndrome rather than a disease, is distinguished chiefly by bronchospasm. There are various causes of bronchospasm, and I and many others have observed the response of the allergic variety to acetyl-salicylic acid. Some patients have even made the discovery for themselves.

I have no doubt that Dr. Barber will probably answer Dr. Wilkinson in detail.—I am, etc.,

Brookwood. H. M. STANLEY TURNER.

Achromotrichia in Tropical Malnutrition

SIR,—I was interested in Dr. William Hughes's article on achromotrichia in African children (July 20, p. 85) as I have recently seen similar types of depigmentation of hair and skin in Europe. I should explain that I am an Army M.O. with administrative charge of a Civilian Internment Camp. The internees are here pending investigation of their part in the Nazi régime, etc. Many of them are considerably undernourished, and recently I have seen four cases with the following points of similarity:

(1) All were males over 55 years of age and had been in a poor state of nourishment previous to arrest.

(2) On the backs of the hands, the wrists, and front of the neck the skin was thickened, brown, and there was a flaky desquamation. Two of the men showed snow-white patches in these brown areas.

(3) The tongue was rather red and quite smooth. There was no pain or burning taste.

I wondered if this might be a pre-pellagra stage, although there were no signs of C.N.S. involvement or diarrhoea, etc. Large doses of vitamin B_1 and increased diet had no effect. Unfortunately vitamin B_2 is not available.

I have noticed several cases of depigmentation of a patchy type in the hair. It cannot be pulled out painlessly though. The German doctors here consider this to be a symptom of anxiety rather than malnutrition.—I am, etc.,

B.A.O.R. E. ROEBUCK, Capt., R.A.M.C.

Pleural Shock or Cerebral Air Embolism

SIR,—It is true that when a clinician describes a patient as being in a state of "shock" he is not diagnosing a specific disease but is employing a convenient label to attach to a clinical syndrome—i.e., to a fairly clearly defined group of symptoms and signs. Unfortunately it is true to say that the diagnosis of "shock" in general is so loosely and variously employed that it may fail to give an outsider an exact indication of how ill the patient is, or of what symptoms and signs he would display to the bedside observer, or of what treatment he would require. I quite agree, however, that it is rather difficult to differentiate between "pleural shock" and "air embolism" (July 20, p. 94) during a thoracic manipulation on seeing these conditions for the first time. Once seen, however, one realizes that one may be dealing with one of two complete and separate conditions.

Needless to say that air embolism may arise as a complication of pleural puncture, but it is hardly possible that so-called "pleural shock" is always due to air embolism and not to a pleural reflex. Air embolism sometimes resembles pleural shock in its manifestation, but it is quite different in its origin. It results from the entry of air into the pulmonary veins and its passage as emboli to the coronary or the cerebral arteries. Death may be immediate, or there may be epileptiform fits, hemiplegia, or profound unconsciousness. In rare cases it may be survived. Air embolism should be extremely unusual if it is always ascertained that the pneumothorax needle is within the pleural cavity by the characteristic oscillation in the manometer.

As I have had the opportunity to make observations upon such cases I would venture to submit these three accounts and the following comments as having bearing upon your annotation in the hope that they may prove of interest in particular to those clinicians who do not accept the difference between the two conditions. The following are the descriptions of the cases: on each occasion I happened to be an eyewitness to the attacks.

Case No. 1.—This occurred in a middle-aged man who was admitted to the hospital with chronic bronchitis, emphysema, and fibrosis of the lung. He constantly complained of severe pain in left side of chest, not responding to medical treatment. To relieve the pain a small artificial pneumothorax was performed at the site of maximal intensity. As soon as a few ml. of air had been introduced into the pleural cavity the patient's pulse slowed down markedly; the blood-pressure fell to 90/70; he became restless, extremely dyspnoeic, and he died within a few minutes, apparently from syncope. Necropsy did not reveal any air entry into the circulatory system.

But "pleural shock" as a reflex phenomenon can be better demonstrated by the following two reports:

Case No. 2.—A young man of 28 suffering from severe emphysema suddenly developed a spontaneous pneumothorax. The symptoms were very dramatic: sudden pain in the affected side, very severe dyspnoea, and cyanosis (i.e., cardio-respiratory embarrassment) were the main features. The physical signs coupled with the radiological findings showed a large spontaneous pneumothorax from a ruptured bulla. During the attempted withdrawal of air from the pleural cavity to mitigate cardio-respiratory embarrassment signs of severe syncope appeared, together with slow pulse, fall of blood pressure, and cold sweating. The aspiration had to be abandoned.

Case No. 3.—A female patient aged 45 was admitted to hospital for investigation and observation of her lung condition, which proved to be an abscess in the upper part of the left lower lobe. Three days after admission she was suddenly seized with an excruciating pain in the left side of the chest in the precordial region. She developed severe cyanosis, cough, and dyspnoea. The pulse became rapid, and she lay motionless, suffering from great pain. The breathing became shallow and frequent. Only later, about three hours after the attack, did physical investigation reveal a large pleural effusion as a result of rupture of the abscess into the pleural cavity. *X*-ray examination showed an air- and fluid-level, and aspiration yielded pus. Following the first aspiration the patient immediately collapsed, the pulse became slow, and the blood pressure fell to 80/60.

All three cases are characteristic in their uniform reaction, course, and symptomatology, with the exception of the first one, who succumbed, whereas in the two latter ones recovery was immediate after discontinuation of the procedure. Although the cases discussed were not always associated with artificial introduction of air into the pleural cavity, analogy can and should be drawn in order to explain syndromes arising during damage to the pleura, characterized with marked slowing of the pulse, pallor, faintness, and, above all, profound fall of blood pressure, which may occasionally lead to a fatal syncope.

Pleural shock.—The cardio-vascular reaction is apparently due to a pleural reflex, since a similar effect upon the heart rate and blood pressure can be induced in animals by stimulating the pleura. It is more commonly seen as mentioned above when the chest is punctured for the withdrawal of fluid or air than during the induction of air in the production of pneumothorax, a fact among others which argues against its being due to air embolism. Injury to the visceral pleura or the underlying layer of pulmonary tissue appears to be a factor essential for the production of this type of circulatory collapse. This may also explain "pulmonary shock" as a common occurrence when spontaneous pneumothorax occurs in the course of treatment by artificial pneumothorax—i.e., rupture of the lung tissue owing to increasing tension upon adhesions. I noticed also that the reactions occurred chiefly in nervous patients and if the pleura is not anaesthetized.

If the descriptions and suggestions just made are taken into consideration immediate "pleural shock" would turn out to be closely related to the reflex vaso-vagal syndrome, or fainting attacks, associated with slowing of the heart and peripheral vasodilatation and fall of blood pressure, with a result of syncope and, very rarely, death.—I am, etc.,

Hitchin. D. GUTMANN.

Clinical Pathology and General Practice

SIR,—All are agreed (Dr. S. C. Dyke, July 20, p. 95) that family doctors need facilities for simple laboratory tests. How are they to be provided? First, it is utterly useless to suggest that teaching hospitals or universities shall do this work. They are already understaffed and overworked. Their loads must be reduced so that they may undertake relatively more teaching and original investigations.

Possible methods are: (1) That the Association of Clinical Pathologists organize a service to cover the whole country. Much of the private consulting work is already undertaken by members of this Association, which, however, is not big enough yet to tackle the whole population. (2) That family doctors themselves be trained to do much of the work. Personally, I regard this as the best solution, but clearly each doctor would be able to deal with fewer patients, and the nation would need more doctors. (3) That practitioners' own dispensers be trained in clinical laboratory methods. (4) That the Pharmaceutical Society organize a clinical pathological service to cover the whole country. (5) That trained laboratory technicians do the work for practitioners or groups of practitioners. The difficulties of this arrangement are to guarantee a livelihood for technicians and to see that a good standard of work is maintained in relative isolation. (6) A combination of (1) and (4). (7) If the National Health Service materializes, that family doctors refer their clinical pathology to the pathological departments in their local Health Centres. The great advantage of this would be ease of consultation between practitioner and pathologist. The great danger would be that in time Health Centres would be flooded with routine work and practitioners might become less self-reliant.

In writing these notes I have not forgotten the excellent work done by the E.M.S. Pathological Service.—I am, etc.,

Chelsfield. G. A. HARRISON.

Nomenclature of Chemical Compounds

SIR,—I would like to draw attention to the frequency with which an element is blamed for the toxicity of one of its compounds through lax nomenclature. For instance, poisoning by any of the compounds of mercury is often referred to as mercurial poisoning. Similarly, but less frequently, this applies to the compounds of lead, arsenic, chromium, and other elements.

This may seem a small point, but I believe it is very misleading and often causes false impressions. I have heard surprise expressed that mercury fulminate or mercury bichloride or calomel did not cause the classic symptoms of stomatitis, tremor, and erethism; but the surprise should rather be if similar symptoms were produced, for it is almost the same as expecting chlorine poisoning from common salt.

There are always exceptions. Some substances are easily broken down or are acted upon in the body so as to cause symptoms related to their components; whilst others, apparently by coincidence, may have similarity of action. But the vast majority should be treated as separate entities, the slightest change in structure being likely to cause profound differences in their reaction. This is well illustrated by some of the organic compounds in which even an isomeric change may mean the difference between life and death. May I therefore proffer my plea: chemical names in full when referring to toxic compounds.—I am, etc.,

London, S.E.18. A. L. LEIGH SILVER.

Psychology in the Child's Education

SIR,—What a shame that Dr. Ellis Stungo should be accused of supporting Nazism as a result of his letter (June 15, p. 930). I am sure that in discussing the Educational, Scientific, and Cultural Organization of U.N.O. he is much more imbued by the spirit of Sir Galahad than by that of Adolf Hitler, and if his holy grail does not after all consist of the simple manœuvre of teaching psychology in the classroom, nevertheless he has emphasized the fact that education is failing in many quarters to justify its literal translation of "leading out" in us a knowledge of ourselves. I agree with the criticism that the teaching of psychology directly to children is as likely to create introspection as it is likely to "educate." No expert psychiatrist would present his patient with the facts of his neurosis face to face. He "leads out" the patient's insight and allows him to educate himself gradually—so with the teacher and the pupil. Literature teaches children psychology: the Brontës, Shakespeare, Barrie were all good teachers of psychology; and, as Dr. Stungo says, religious instruction teaches psychology.

I think the variety of opinions expressed in this correspondence should emphasize that psychiatrists as a group should be the last people to teach anyone. We can give information; we can educate our neurotics along the lines of psycho-analysis; but our banner carries the motto "*Quot homines tot sententiae.*"

We can do a lot of good in providing the teachers with the information they want to know, subject to their own discretion, and there is no lack of desire for that. The four child guidance clinics of which I have the honour to be in charge deal with the teachers of a county, a county borough, and part of another county in the vicinity of London, and I find that the teachers are not only well informed psychologically but are keen for more psychiatric information and direction in the disposal of their abnormal pupils. In Glasgow, I understand, there is an extensively organized relationship between chosen teachers who visit the corporation clinics and the child psychiatrists.—I am, etc.,

Kingston-on-Thames. JOHN A. MCCLUSKIE.

SIR,—The recent letters on the above important subject are of interest, but we must realize in spite of one of the letters that there is a yawning gulf between this subject and that of planning the world's future. There is no doubt that psychology must play its part, important but limited in extent; but just as Dr. Ellis Stungo suggests that there must be a careful selection of teachers—and no doubt many other admirable leaders—so also he should be the first to admit that there must be a careful selection of psychiatrists. If one is going to psycho-analyse every action and word of every child and adult with regard to the past, present, and future, then we shall never have the time even to psycho-analyse the numerous daily actions and words of the psychiatrists themselves. We must have the best men available in a subject of such vital importance and so far little understood. No doubt we have these men available, and rightly acclaim them, in the leading figures of international psychiatry, and also in the very first-class men that we ourselves possess.

Everyone must heartily agree with Dr. D. W. Winnicott (June 29, p. 998) that the ". . . real source of good citizenship is in the life of the child in his own home," but would disagree with Dr. Ellis Stungo as to how this is to be attained. And if indeed we have the wrong leaders Dr. Winnicott may be perfectly correct when he asks—and it is a question that *must* be answered—"why is it that when we start planning we so easily start on the wrong foot?"

I most certainly agree with Dr. Michael Fordham (July 13, p. 62) that teachers should be left to their own jobs; and there was never anything more true than Dr. Fordham's words, "it is useless to talk on the subject [of behaviour] unless they themselves are good citizens." Otherwise and in plain English it is just hot air and a pure waste of time of all concerned.

Psychiatrists undoubtedly, and rightly so, must play their share like everyone else in building the new world, but they, like other leaders, must be carefully selected. By all means let us all pool our knowledge and learn from each other. But before that I would suggest that it would be beneficial for some of our psychiatrists to sit for a long time in humility (for that is the true essence of greatness and character) before the teachers and other responsible leaders who have already proved themselves and their worth, and who have "stability, character, intelligence, aptitude, freedom from prejudices, and rigid social, political, or religious attitudes," before attempting to plan for the new world.—I am, etc.,

Leyton, E.10. A. LIONEL ROWSON.

*** This correspondence is now closed.—ED., *B.M.J.*

London College of Osteopathy

SIR,—The question whether medical men should or should not study osteopathy does not, it seems to me, depend upon whether the basic principles agree with our—notoriously fickle—theories but upon whether it works. And I myself, in common with thousands of sane people, medical or not, have indubitable proof that osteopaths will frequently cure or relieve conditions which orthodox practitioners have either failed to cure, or consider incurable, or for which unnecessarily drastic treatments and anaesthetics are used. In short, medicine and surgery can learn something from osteopathic methods which will be of benefit to our patients.

The neat circular of the London College of Osteopathy is a decent and dignified statement of their case, and does not claim to oust medicine, surgery, pathology, and the rest from their place. It is not a substitutional, but an additional, form of therapy. Admittedly, part of the reason why the grocer's boy or the untrained "nature" healer can dub himself an osteopath with impunity is the fault of the osteopaths for not in the past presenting an objective case. But the fact that the medical profession has turned up its nose at the method is responsible for driving many people into the hands of the unregistered—and, in view of the present lack of control, of the unskilled and incompetent. Thus I suggest directly the contrary to what Mr. Tucker (July 27, p. 141) wishes: that the medical man should disarm the unregistered practitioner *not* by ignoring what is good in his methods (and skilful osteopathy *is* good, and is carried out by men as fully trained as our American colleagues in the profession) but by incorporating them in the field of therapy. We should hear much less, then, of the real quacks, and, besides, confound those who—with some justice—charge the medical profession with obscurantism where new methods are concerned.—I am, etc.,

London, S.W.3. L. J. BENDIT.

Book-reviewing

SIR,—A review of any book should indicate whether in the opinion of the reviewer the book is informed and accurate. In books on specialist topics a fellow specialist is the best judge, and his specialist standing does not imply that he is necessarily a worse critic of style and presentation. Unfortunately, however, a specialist usually has social contacts with his fellows, and adverse criticisms may therefore lead to some degree of ill-feeling, since scientists have no greater ability to separate reason and emotion than other people. Thus the practice of leaving reviews unsigned is, I think, a good one.

Some of your correspondents imply that anonymous contributions are less authoritative than signed ones. This should not be so—anonymous contributions in any journal should have all the authority that the journal itself commands. The better the journal the better the talent at its command. Reviews should have equal authority with the leading articles, which are still almost universally anonymous. The growing habit of printing the names of correspondents and critics lessens the responsibility of the editor, who increasingly becomes a nonentity. This may be good enough for *Punch*, but I hope it will not be good enough for the *British Medical Journal*.—I am, etc.,

London, W.1. PETER C. WILLIAMS.

Dried Sera as Controls

SIR,—It is a standard immunological technique to include in a series of antibody determinations a serum of known potency. On general principles this would be especially necessary in the Wassermann reaction, which involves so many variables. It is generally agreed that known positive and negative sera should be included with each batch of tests, but it is sometimes difficult to ensure that these sera are available when required. It was considered that freeze-dried positive sera of known potency might form a useful standardized reagent for this purpose.

Positive sera were obtained from two known syphilitics and the serum distributed in 0.5 ml. amounts in small glass tubes, dried from the frozen state, sealed in an atmosphere of dry nitrogen, and stored in the refrigerator. Immediately before use the serum was reconstituted by the addition of 0.5 ml. distilled water. These sera have been used by us during the past twenty months and have been found to be stable and to act as useful controls in the Wassermann reaction. There appeared to be a slight loss in complement-fixing antibody during the first month, but no further loss in potency was detected during the test period.

It would be a considerable help in controlling and correlating results if dried standard sera for complement fixation tests were available. Similar sera may prove of value in other complement fixation tests—e.g., for *N. gonorrhoeae, Br. abortus,* and *M. tuberculosis,* where known positive sera are less readily available.—We are, etc.,

J. C. COLBECK.
H. PROOM.

Wellcome Research Laboratories.

The Population of India

SIR,—Dr. B. H. Kirman (June 8, p. 890) finds it "fantastic, inhuman, and unscientific to describe India's problem as an excess of population," but no one with knowledge can deny that *the relation between the population and the food supply* is a real problem. The Government, by means of imports, distribution, rationing, and price control, has done much to avoid widespread famine and disaster, but what I tried to point out in my letter (May 25, p. 811) was the fact that the disproportion between the food supply and the size of the population is realized acutely when seen in particular cases. I come across the problem daily in my medical practice, children being brought for medicine when their immediate and vital need is food. I quoted in my letter one such case, where the birth of the fifth child so strained the family resources that it was directly responsible for the death of the previous two, and I could quote many such cases. For instance, another patient, aged 10, weighs 29 lb. (13.2 kg.), and her younger brother, due to calcium deficiency, has rickets even in a land of abundant sunshine. They are members of a family of five children whose father earns Rs.30–Rs.40 (£2 5s.–£3) per month. If another child were born at present it could only be at the expense of those already finding life and health precarious. An increase in grain imports would not help this family, who cannot afford even to draw their full ration (10 oz. or 280 g. rice per head per day—1,000 calories approx.).

In January, 1945, I did a survey of health and diet of five families earning Rs.18 per month. I found that two families, consisting of two adults only, were getting 1,700 and 2,100 calories per intake unit. Those with children were getting 1,200 to 1,400 calories per intake unit (Stiebling scale). Protein varied from 23 to 40 g. per day and calcium 0.08 to 0.2 g. (standard requirement 0.6 g.). In both cases the intake was lowest where it was most needed, in families of growing children. Health varied correspondingly. These are the facts, a problem for those who have to face them in practice.

I agree with Dr. Kirman that this situation cannot be remedied "by efforts on the part of Europeans—no matter how well meaning—to alter the marital habits of the Indian peasant." My plea is this, that there should be made available for poor parents who care for the well-being of their children the knowledge that at one part of the menstrual cycle only is conception likely to occur, and that if they abstain from intercourse during that period they may be able to avoid further undermining the health of the children they already have by annual additions to the family. This knowledge will become available for such people only in so far as it is absorbed into local lore and tradition. It cannot be forced on them by foreigners. I believe, however, it would be readily accepted and applied by them if all Indian doctors, especially women, and welfare workers who really care about them told them the facts.—I am, etc.,

(MRS.) A. W. MEGAW BROWN.

Travancore.

Obituary

Dr. CRAWFORD SMITH CRICHTON died suddenly at his residence in Redhill, Surrey, on July 20, aged 64. He was the son of J. S. Crichton, M.D., of Arbroath, and was born in that town. From the Arbroath Academy he went to Edinburgh University, where he qualified M.B., Ch.B. in 1903. After graduation he acted as house-surgeon at Noble's Hospital in the Isle of Man, and was later assistant medical officer at Bexley Asylum. He then assisted Dr. Spencer Palmer of Redhill, whom he succeeded in 1912. During the war of 1914–18 Dr. Crichton served in the R.A.M.C. on the Western Front, being sent home in 1917 as surgeon to the Redhill war hospital. He was subsequently medical officer to the Poor Law Infirmary at Redhill, and when this became the County Hospital he was appointed visiting surgeon, a post which he held at his death. He was also senior surgeon to the East Surrey Hospital, medical officer to the St. Anne's Institution, and district medical officer for Redhill.

Dr. Crichton was a man of strong personality, unlimited energy, and great administrative capacity. These qualities were combined with great clinical ability, and it is not surprising that he held the highest posts and had enjoyed most of the honours open to a medical man in his district. He had been chairman of the medical staff of the East Surrey Hospital for some years, a former chairman of the Reigate Division of the B.M.A., and a past president of the Surrey Branch. He was president of the Surrey Medical Benevolent Society and a member of the Surrey Hospitals Divisional Council. It is only his passing which has brought full realization of the scope and quality of his activities. A fine surgeon, he was a brilliant example of the general practitioner who had developed specialist interests, a leader in all professional affairs, and an outspoken opponent of all encroachments on professional liberties. His loss will be keenly felt both by the profession and the public.

K. W.

Dr. JOHN ALEXANDER WILSON died suddenly on July 30. He qualified M.B., Ch.B. Glasgow in 1909. His service in the Glasgow Public Health Department goes back to the second decade of the century, when he was transferred from the central laboratory to the tuberculosis service, then in its infancy. He was awarded the O.B.E. in the first world war for the laboratory work he did in association with the late Sir John Rose Bradford. In 1929 he was appointed Physician-Superintendent of Glasgow's new hospital for children at Mearnskirk. He also became the senior lecturer on clinical tuberculosis at Glasgow University. At Mearnskirk, Dr. Wilson combined the functions of physician and administrator with marked success. At the beginning of the recent war the hospital was more than doubled in size to about 1,200 beds for the treatment of naval sick and wounded.

Sir Alexander Macgregor writes: I know of no man of whom it can be said with greater truth that his work was his life. He loved his hospital and everyone in it; he was rewarded by the deep affection and esteem of staff and patients alike. His happy disposition made him a popular figure, especially with his child patients. As a superintendent he was friendly and accessible, his success being in large degree due to the high personal standard of work and conduct he set for himself, which acted as a stimulus and example. He never lost his scientific outlook. His interest in bacteriology, which was his first love, led him to spend most of his spare time in the hospital laboratory, investigating, among other subjects, the incidence of human and bovine tuberculosis, and preparing a remarkable series of pathological specimens for teaching purposes. He knew the art of clinical instruction, and his bedside demonstrations were enriched by his wealth of experience and enlivened by his keen sense of humour. In spite of a lingering illness, he carried on, brave, kind, and thoughtful for others to the end.

HERBERT HARLAND RAW, one of the best-known local medical men, died at Whitby, Yorkshire, on Aug. 5 at the age of 68. He was the son of the late Rev. John Frank Raw, of Danby, and through his mother was first cousin to the late Sir Stanley Woodwark, F.R.C.P., and the late Dr. C. S. Woodwark, of Grimston. He was a student contemporary of both his cousins

at St. Bartholomew's Hospital, and qualified M.R.C.S., L.R.C.P. in 1901. Almost immediately after qualification he settled in practice at Whitby, where his mother and most of his ancestors had been born. He became in time almost, but not quite, the doyen of the local profession. He was medical officer to the Post Office, to Trinity House, and to the Whitby Institution, local police surgeon, and honorary surgeon to the cottage hospital. During the first world war he served with the R.A.M.C. for four years, mostly on hospital ships but also in Mesopotamia and Persia. In Whitby he will long be remembered for his interest in local affairs and his successful efforts in connexion with housing schemes and public health. He was elected to the urban council in 1922, and served as chairman in 1926; during his membership he did much for maternity and child-welfare. For ten years he was divisional surgeon to the local St. John's Ambulance Brigade. Some years ago he was joined as junior partner by Dr. R. N. P. Wilson, and later by Dr. Cedric Cone. On his retirement in July, 1945, after prolonged ill-health, he resided at Captain Cook's house in Grape Lane, Whitby, which he had purchased some years previously. Dr. Raw is survived by his widow, two sons, and one daughter. He had been a member of the British Medical Association for many years and in 1936 was chairman of the Scarborough Division.

VERNON THORNE THORNE, born in 1904, was the son of Dr. Richard Thorne Thorne and grandson of Sir Richard Thorne Thorne, K.C.B., F.R.S., F.R.C.P., both of Bart's and the latter on the teaching staff of the hospital. Educated at Marlborough and Caius College, Cambridge, he entered Bart's in 1926 and took the M.R.C.S., L.R.C.P. in 1930. He graduated M.B., B.Ch. two years later and joined his father in general practice at Woking. After three years he decided to join the Colonial Medical Service and so he obtained the D.T.M.&H. in 1936 and chose Nigeria as his colony. When the war broke out, failing to secure his release to join the R.A.M.C., he continued with his duties in Nigeria and the British Cameroons and worked exceedingly hard for long-extended tours of duty. He became seriously ill in March, 1945, and was invalided home in June of that year suffering from a tropical form of chronic endocarditis. After three months in hospital he returned to his home, where he died on August 5. He was married at St. Bartholomew's the Great in January, 1938, and leaves a widow and daughter.

On July 22 LUDOVICUS CORNELIUS JOSEPHUS BOECKX died in Fulham at the age of 71. He was born in September, 1874, at Antwerp, the seventh of the eight children of Louis and Coleta Faes. Educated at Malines, he studied medicine at Louvain University and graduated with distinction as M.D. in 1897. After filling a hospital appointment at Louvain he returned to Antwerp, where he served on the staff at St. Camille and St. Mary's Hospitals. When Antwerp fell to the invading German forces in 1914 he escaped to England, whither his wife and family had preceded him. At that time foreign refugee graduates were being admitted to the British Register without further ado, and Boeckx settled in London, where he had a practice in South Kensington and also consulting-rooms at Fulham. He never returned to practise in Belgium, having too clear an insight into German cruelty and mentality to risk a return to his native land; and events proved the prudence of this decision. Of recent years he worked in Fulham only, where he devoted much of his time to specializing in the treatment of venereal diseases. He only relinquished work quite lately, when overtaken by illness. He married, in 1900, Elizabeth Grange of Antwerp, who survives him with their two sons and two daughters, all of whom are married.

H. R.

By the sudden death at the age of 71 of ERNEST WARDLAW MILNE on Aug. 4 at New Barnet, the Barnet district lost one of its oldest active practitioners. Milne took his M.B., Ch.B. at Glasgow in 1900 and had practised in Barnet since 1906. From his early days he was intensely interested in ophthalmology and in later years this speciality took an increasing amount of his time. He served with the B.E.F. in 1916 and during the recent war with the Home Guard and on medical boards. Throughout his extraordinarily active life Milne succeeded in retaining a zest for keeping abreast of the latest work in medicine—and he combined this with a keen psychological insight and a determination to do all that he was physically capable of doing for the welfare of his patients. It is understandable, therefore, that he built up a large practice quite apart from his eye work. In his younger days he excelled at tennis, was a keen follower of Rugby football, and an enthusiastic fisherman—like the true Scotsman he was. Amateur theatricals at one time took such leisure as he had, and in more recent years social welfare, in particular the religious side, attracted his deep and sincere interest. If one had to select one characteristic above all others it would not be his natural zest for life, his energy and sense of humour, nor his interest in all aspects of medicine, but his strong belief in the inherent goodness of the ordinary man. During twenty years' close association with him not one unkindly criticism of anyone can be remembered—albeit he had strong beliefs and never failed to express them clearly. Milne joined the B.M.A. in 1911 and was chairman of the Barnet Division in 1929. He leaves a son in practice and a married daughter, and the attendance at the funeral must have shown to his widow and family how widely loved he was in the district to whose interests he can be truly said to have given a life of service.

Medico-Legal

A HERBALIST FINED

The recent prosecution of Mr. Albert Lindley Payne, of Shipley, for pretending to be a registered medical practitioner has particular interest in view of the probability that the Medical Act, 1858, will be revised. Section 40 lays down that any person who shall wilfully and falsely pretend to be or take or use the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner or apothecary, or any name, title, addition or description implying that he is registered under the Act, or that he is recognized by law as a physician, or surgeon, or licentiate in medicine and surgery, or a practitioner in medicine, or an apothecary, shall upon summary conviction for any such offence pay a sum not exceeding twenty pounds. As the reported cases on the Section show, these words leave plenty of room for ambiguity and evasion, and the joint recommendations just published by the three defence societies (*Journal*, July 6, p. 21) ask that the forbidden designations should include abbreviations of recognized medical qualifications, the courtesy title of "Dr." when associated with the healing art, and any other common description generally accepted as indicating a registered practitioner.

Mr. Payne was summoned for using the letters M.B. implying that he was registered, also for issuing two certificates purporting to be medical certificates and carrying out two medical examinations, thereby implying that he was registered. The prosecution, instigated by the London and Counties Medical Protection Society, showed that Mr. Payne had displayed a placard outside his house describing him as a herbal practitioner. The word "medical" in front of "herbal" had been painted out—according to Mr. Payne some time ago; the placard also offered massage, manipulative surgery, and artificial sunlight. A woman witness said that she went to Mr. Payne's house and was ushered into a room full of medical instruments. She complained of being run down, and Mr. Payne examined her with a stethoscope, gave her some medicine to take three times a day, and wrote her a certificate signed with his name followed by the letters M.B. and some others that were indecipherable. An inquiry agent was next sent to the house, and Mr. Payne met him in a white coat. This witness said he had complained of a duodenal ulcer (this was true), and Mr. Payne, after examining him, also with a stethoscope, drew a sketch of the ulcer and gave him four bottles of medicine, three packets of powder, and a certificate of which the signature was followed by the letters M.B. and some other letters. The woman witness admitted that she had seen Mr. Payne's certificate showing that he was a member of the British Herbalists' Union.

Mr. Payne said in his defence that he had practised for some twenty years but had never pretended to be registered. He was well known and highly respected, and no complaint had ever been made against his character. As a member of the British Herbalists' Union he placed the initials M.B.H.U. after his signature. He saw about 3,000 patients a year and manipulated damaged bones and joints. He admitted that he had never told the woman witness that his certificate was not a medical certificate, and said that his certificates had been accepted for exemption from fire-watching. He called witnesses who said that they had never thought he was registered. The magistrates found all the four charges proved (two charges relating to two

patients each) and imposed a fine of £1 on each, with no order as to costs. The Bench may have had in mind, among other authorities, the case of *Jutson* v. *Barrow* (1936), in which the use of the words "manipulative surgeon" by an unregistered person were held by the High Court to be a breach of the Medical Act.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

In a Congregation held on Aug. 3 the following medical degrees were conferred:

M.D.—*In person:* A. M.-M. Payne, G. E. Burton, P. T. Cooper, R. McL. Todd, K. G. Bergin, A. C. Thackray, E. M. Darmady, J. Murray.

M.B., B.CH.—*By proxy:* G. L. Leathart, W. D. Mail, J. S. Rivers, O. C. A. Scott, H. C. Churchill-Davidson, P. S. Davis, E. C. Glover, M. K. Towers, J. Vallance-Owen, R. J. Williams, W. R. Wardill, J. R. B. Dixey, T. C. Gibson, K. E. Jefferson, P. Rhodes, I. W. Whimster, A. G. Jessiman, S. Vakil, D. M. C. Ainscow, W. McC. Edgar, J. B. Frost, M. Hemming, E. M. James, D. V. Milward, D. R. Smith, D. R. Wallace-Jones, D. B. Wallis, H. Whitmore, E. H. W. Burt, D. J. Crockett, L. Haas, P. S. Hall, D. R. Morgan, H. W. Trusted, A. C. Franks, J. G. Selwyn, M. Shirley, W. van't Hoff, J. W. Coleman, K. E. Marsh, R. J. D. Temple, D. K. Briggs, A. W. I. Hall, J. S. Swallow, G. S. Andrew, W. J. Hay, C. McIver, E. P. G. Michell, D. T. Milnes, A. H. Littlewood. *In person:* A. V. G. Bibby, B. H. Brock, P. L. M. Hartley, P. M. R. Hemphill, I. M. Ormerod, H. B. Whitmore, J. A. Bulleid, L. W. Clarke, R. W. J. Maclure, D. E. Cullington, C. E. D. Taylor, R. Randell, I. F. J. Churchill-Davidson, S. L. Hetherington, J. D. Lever, R. H. G. Lyne-Pirkis.

Titles of degrees were conferred by diploma on the following members of Girton and Newnham Colleges during July: C. M. E. Jones, M.B., B.Ch. (Girton); G. A. Meigh, M.B., B.Ch., Mrs. M. H. Miller, M.B., B.Ch., and Mrs. A. M. P. Pantin, M.B., B.Ch. (Newnham).

The E. G. Fearnsides Scholarship has been awarded to Lionel Wolman, M.B., B.Ch.

UNIVERSITY OF EDINBURGH

Richard White Bernard Ellis, M.D., F.R.C.P., director of the Department of Child Health at Guy's Hospital, has been appointed to the Edward Clark Chair of Child Life and Health in the University, in succession to Prof. Charles McNeil, M.D., F.R.C.P., who is due to retire on Sept. 30.

UNIVERSITY OF LONDON

Ian Aird, Ch.M., F.R.C.S.Ed., has been appointed to the University Chair of Surgery tenable at the British Postgraduate Medical School as from Oct. 1.

Benjamin Stanley Platt, M.Sc., Ph.D., M.B., Ch.B., has been appointed to the Chair of Human Nutrition tenable at the London School of Hygiene and Tropical Medicine.

The following have been recognized as teachers of the University in the subjects indicated in parentheses: *Middlesex Hospital Medical School*; Dr. D. Slome (Physiology). *Westminster Hospital Medical School*; Dr. R. M. Haines (Pathology, Morbid Anatomy and Histology). *British Postgraduate Medical School*; Dr. Mary Barber (Bacteriology). *St. Thomas's Hospital Medical School*; Dr. H. Hughes (Anatomy).

The appointments of house-physician and junior assistant medical officer at North Middlesex County Hospital have been approved for the purposes of the M.D. examination (Branch I).

An additional examination for the Diploma in Public Health will be held in March, 1947. The following have been added to the areas approved for the purpose of instruction in public health administration for the Diploma examination: Metropolitan Borough of Stepney, Municipal Borough of Twickenham.

Major R. G. Gayer-Anderson, R.A.M.C. (ret.), who died on June 16, 1945, left as a bequest to the University his collection of classical antiquities. The bequest has been accepted, and the collection, which was formed almost entirely in Egypt, will be housed at University College in close proximity to the College's collection of Egyptian antiquities.

London Hospital Medical College

The following entrance scholarships have been awarded at the London Hospital Medical College: "Price" Entrance Scholarship in Science, value £100, H. O. Phillipson; "Price" University Scholarship in Anatomy and Physiology, value £100, E. W. P. Jones (Emmanuel College, Cambridge); Open University Entrance Scholarship, value £100, D. S. H. W. Nicol (Christ's College, Cambridge) and P. G. J. Stevin (Jesus College, Cambridge) (equal, scholarship divided).

UNIVERSITY OF SHEFFIELD

Prof. Colin Panton Beattie, M.B., Ch.B., D.P.H., has been appointed Professor of Bacteriology in succession to Prof. Wilson Smith, who recently left the University to occupy the Chair of Bacteriology at University College Hospital Medical School, London.

COMBINED HOSPITALS UNIVERSITY ENTRANCE SCHOLARSHIPS

The following awards have been made:

St. Bartholomew's Hospital: R. P. Holmes, Trinity College, Cambridge (Scholarship); J. G. Widdicombe, New College, Oxford (Exhibition).

Guy's Hospital: J. G. Armstrong, Queen's College, Oxford (Exhibition); the Scholarship was not awarded.

St. Thomas's Hospital: E. H. R. Ford, Clare College, Cambridge, and J. B. Self, Gonville and Caius College, Cambridge (Scholarship jointly); the Exhibition was not awarded.

The Services

DEATHS IN THE SERVICES

Col. HUGH MURRAY MORTON, C.B.E., D.S.O., R.A.M.C., retired, died, aged 73, at Berwick-on-Tweed on August 7. He had a distinguished career and saw much active service. He was born in Cumberland and educated at the Grosvenor College, Carlisle, and at Edinburgh University, where he graduated M.B., C.M. in 1896. After holding an appointment as house-surgeon in Carlisle, he entered the Army Medical Service, as it then was, in 1898 and served in the South African war from 1899 to 1902, when he took part in the Relief of Ladysmith and in the campaigns in the Orange Free State and the Transvaal. He was awarded the Queen's medal with five clasps and the King's medal with two clasps. Later he served throughout the first world war of 1914–18, first in the Gallipoli campaign from the initial landing to the evacuation, and subsequently in Egypt and Mesopotamia. He was A.D.M.S. of the 13th Division in Mesopotamia 1916–19 and was awarded the D.S.O. in 1917 and the C.B.E. in 1919, together with the 1915 Star and other medals. After his retirement he lived at Berwick-on-Tweed, where his wife survives to mourn his loss. He had been a member of the British Medical Association since 1897.

AIRBORNE MEDICAL SOCIETY

It has been decided to form a permanent Airborne Medical Society. Membership will be open to all medical and dental officers who are entitled to wear the maroon beret. Particulars may be obtained from the honorary secretary, Mr. Guy Rigby-Jones, *M.C.*, F.R.C.S.Ed., 63A, Belsize Park Gardens, London, N.W.3.

Medical News

The Medical Women's International Association will meet in London in September. The London Association of the Medical Women's Federation will hold an evening reception for the council and delegates at the London School of Medicine for Women (8, Hunter Street, W.C.), on Thursday, Sept. 19, from 8 to 10 p.m. It is hoped that as many as possible of the members of the London Association will attend. Over fifty delegates are expected from all parts of the world. Those who wish to be present are asked to inform the hon. secretary (Miss Josephine Barnes, F.R.C.S., 7, Wimpole Street, W.1) before Sept. 15.

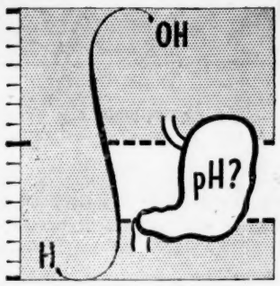
The meeting of the London County Council on July 2 had before it the recommendations of the General Purposes Committee on salaries. The Committee took note of the Government's White Paper on departmental salaries issued in September, 1945. It recommended that the salary of the Medical Officer of Health of the L.C.C., Sir Allen Daley, should be increased to £3,500 a year, this recommendation being personal to the present holder of the office and to be reviewed when the time comes to make a new appointment. The figure of £3,750 is proposed as the salary of the Clerk of the Council.

A quarterly meeting of the Franco-Anglo-American Medical Society will be held at 11, Chandos Street, Cavendish Square, London, on Tuesday, Sept. 10, at 2.30 p.m., with Lord Horder in the chair.

A clinical meeting of the Medical Society of the L.C.C. Service will be held at Queen Mary's Hospital, Carshalton, on Wednesday, Sept. 4, at 3 p.m. Demonstrations of the work in the various units will be given, and discussion on selected subjects will follow.

The annual general meeting of the London Association of the Medical Women's Federation will be held at B.M.A. House, Tavistock Square, W.C., on Tuesday, Sept. 24, at 8.30 p.m., when Dr. Henriette A. Lohr (Amsterdam) will speak on "Medicine in Holland under German Occupation."

The next meeting of the Zoological Society of London for scientific business will be held on Tuesday, Oct. 8, at 5 p.m.



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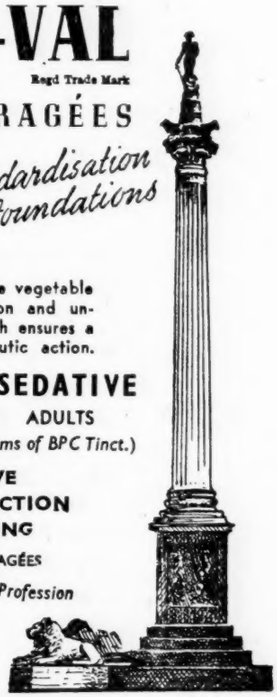

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Vitamins in disorders of the circulation

The following are suggestions for the application of vitamin therapy in certain disorders of the circulation. Space limits the conditions that can be dealt with here but a sequel will appear in the next issue of the Journal.

Condition	Indications	Therapeutic Agents
CARDIAC CONDITIONS Beri-beri heart Congestive failure with oedema associated with mild degrees of vitamin B_1 deficiency	Vitamin B_1 is needed for both these conditions possibly in high doses.	VITAMIN B_1 (Aneurin Hydrochloride). Ampoules : 10, 50 or more mg. daily. Tablets : 3 mg. twice or thrice daily. BEFORTISS B Complex Capsules or BEMAX to supply the other factors of the B complex.
CIRCULATORY DISORDERS without congestive failure, e.g., Varicose veins	Vitamin B_1 in high doses has been found to relieve pain.	VITAMIN B_1 (Aneurin Hydrochloride). By injection or by mouth. 10 mg. or more daily.
SECONDARY EFFECTS Hepatic Diseases obstructive jaundice	Low prothrombin is here associated with defective absorption of vitamin K from the absence of bile salts in the intestine.	VITAMIN K. One tablet daily with bile salts.
Ulcerative Colitis.	Where fat absorption is defective.	VITAMIN K. One tablet daily.

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The Minister of Health, Mr. Aneurin Bevan, has approved the appointment of Mr. H. Symon to be Under-Secretary (Housing) in the Ministry, and of Miss Enid Russell-Smith to be an additional Under-Secretary, Health Services Division. Mr. Symon succeeds Miss Evelyn Sharp, who has been appointed Deputy Secretary of the Ministry of Town and Country Planning.

The following officers were elected at the annual general meeting of the Central Council for Health Education: *President*, Lord Woolton; *Vice-presidents*, Sir W. Allen Daley and Dr. Charles Hill; *Chairman of Council*, Mr. Henry Lesser; *Vice-chairman*, Dr. E. K. Macdonald; *Honorary Treasurer*, Mr. E. G. Savage.

The Secretary of State for the Colonies has selected Dr. J. W. P. Harkness, Director of Medical Services, Nigeria, to be Medical Adviser to the Comptroller for Development and Welfare in the West Indies.

In our advertisement columns this week the Royal Melbourne Hospital is inviting applications for the appointment of pathologist to the hospital, at a salary of £1,500 per annum.

The Council of the British Dental Association, meeting in London on Aug. 14, unanimously rejected the proposals relating to dentistry in the National Health Service Bill.

EPIDEMIOLOGICAL NOTES

Typhoid Epidemic

In the week ended Aug. 3 notifications of the enteric fevers were the largest for five years. This increase was due, of course, to the outbreak of typhoid originating at Aberystwyth on July 11. Up to Aug. 21 notifications in Wales had increased to 124, and there had been only two fatal cases—one at Aberystwyth and another at Llanelly. There are now 11 cases infected at Aberystwyth in hospital at Birmingham, and a man of 75 has died. Another death was at Tredegar. Other cases have been reported from Shropshire (3), Hereford (3), and Merthyr (2). The total number of cases in hospitals all over England remains uncertain, but the outbreak appears now to be on the decline.

There are 27 cases of paratyphoid B, including 22 children, in the Halifax Isolation Hospital at Northowram. The precise origin of this outbreak is not yet known.

Anterior Poliomyelitis

The mild seasonal outbreak of poliomyelitis which began last month still persists. Altogether there have been 19 cases, at Barnet, East Barnet, and Potters Bar. Hendon has had 13 cases with 1 death in the last 8 weeks; only 3 of the cases were adults; 3 cases have also been reported from Wembley.

The most recent epidemic in the U.S.A. is in Colorado, where 210 cases have been notified, 104 of them in Denver.

Discussion of Table

In *England and Wales* infectious diseases were less prevalent. There were decreases in the incidence of whooping-cough 376, measles 201, diphtheria 62, scarlet fever 54, and dysentery 31. The only increase was in the notifications of typhoid 52.

A fall in the incidence of whooping-cough was general throughout the country, but the decrease was greatest in the North and especially in Yorkshire West Riding 78 and Lancashire 73. The chief changes in the incidence of measles were decreases in London 102, Kent 58, Durham 52, Lancashire 52, and Warwickshire 43, with a rise in Middlesex 56. The local trends of scarlet fever fluctuated, and the largest variations were an increase in the number of cases in Staffordshire 25 and a decrease in Middlesex 21.

Notifications of diphtheria reached a new low record, which was 1 less than the record of a fortnight ago and 100 less than the lowest weekly return of 1945. The largest decreases during the week were those of Lancashire 27, Glamorganshire 11, and Warwickshire 11.

In *Scotland* the only changes of any size in the notifications of infectious diseases were an increase of 42 in cases of scarlet fever and a decrease of 63 in the notifications of measles. The rise in scarlet fever was general throughout the country.

In *Eire* a fall was recorded for measles 24, diarrhoea and enteritis 13, and diphtheria 9.

In *Northern Ireland* an increase of 13 cases in whooping-cough was reported from Belfast C.B.

Week Ending August 10

The notifications of infectious diseases in England and Wales during the week included: scarlet fever 707, whooping-cough 1,910, diphtheria 243, measles 3,299, acute pneumonia 298, cerebrospinal fever 34, dysentery 84, acute poliomyelitis 18, paratyphoid 13, typhoid 89.

No. 31

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended Aug. 3.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1946					1945 (Corresponding Week)				
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)
Cerebrospinal fever	44	5	15	—	3	39	1	15	—	1
Deaths		—	—				—	—		
Diphtheria	246	18	69	23	15	360	14	103	50	10
Deaths	1	—	—	—	—	8	—	—	—	1
Dysentery	59	8	28	—	—	324	30	56	1	—
Deaths				—	—				2	—
Encephalitis lethargica, acute	1	—	1	—	—	—	—	—	2	—
Deaths		—					—			
Erysipelas			25	6	6			33	11	7
Deaths		—					—			
Infective enteritis or diarrhoea under 2 years				48					26	
Deaths	36	6	7	30	1	53	8	8	22	1
Measles*	3,540	376	98	34	15	2,190	113	57	26	7
Deaths	1	—	1	—	—	—	—	1	—	—
Ophthalmia neonatorum	72	7	15	—	—	74	10	13	—	—
Deaths										
Paratyphoid fever	7	—	1 (B)	—	2 (B)	3	—	3 (B)	1 (B)	2 (B)
Deaths	—	—	—	—	—	—	—	—	—	—
Pneumonia, influenzal	356	26	1	1	3	234	16	3	—	2
Deaths (from influenza)†	4	1	—	—	—	5	—	—	—	—
Pneumonia, primary			138	12				119	12	
Deaths		19		3	9		12		9	7
Polio-encephalitis, acute	1	—				3	—			
Deaths		—					—			
Poliomyelitis, acute	23	1	—	3	1	21	3	3	2	1
Deaths		—					—			
Puerperal fever		5	20		—		4	18		—
Deaths										
Puerperal pyrexia‡	146	10	14	1	—	145	16	8	—	—
Deaths		1					—			
Relapsing fever	—	—			—	—	—			—
Deaths										
Scarlet fever	940	82	134	20	14	1,232	65	181	17	32
Deaths	—	—	—	—	—	—	—	—	—	—
Smallpox	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Typhoid fever	60	1	7	4	1	7	2	1	1	2
Deaths	—	—	1	—	—	—	—	—	—	—
Typhus fever	—	—	—	—	—	1	—	—	—	—
Deaths				—	—				—	—
Whooping-cough*	2,092	159	35	41	27	1,072	46	25	29	6
Deaths	7	—	1	1	1	5	2	—	1	1
Deaths (0–1 year)	357	50	51	45	10	303	41	51	60	17
Infant mortality rate (per 1,000 live births)										
Deaths (excluding still-births)	3,802	587	517	166	99	3,781	549	508	199	108
Annual death rate (per 1,000 persons living)			11·4	10·6				11·5	12·8	
Live births	8,367	1250	1004	506	238	6,786	869	831	376	271
Annual rate per 1,000 persons living			20·2	32·4				16·6	24·3	
Stillbirths	265	37	28			200	11	29		
Rate per 1,000 total births (including stillborn)			27					34		

* Measles and whooping-cough are not notifiable in Scotland, and the returns are therefore an approximation only.

† Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

‡ Includes puerperal fever for England and Wales and Eire.

Letters, Notes, and Answers

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ANY QUESTIONS?

Essential Hypertension

Q.—*A single woman suffers from a severe form of hyperpiesis (B.P. 260/110). This was recognized nine months ago; the symptoms were loss of weight and strength, headaches, and attacks of indigestion with or without vomiting. The case was considered unsuitable for renal sympathectomy, and she was treated medically with potassium thiocyanate and luminal 1 gr. (65 mg.) twice daily and rest. She has improved and ceased to lose weight, and can do a half-day's office work, though her B.P. is still high (225/100). Can you suggest any other treatment?*

A.—So far as can be judged from the data given, this patient is suffering from essential hypertension. If the investigations showed little or no impairment of renal function the hypertension cannot be of the malignant type; moreover, a patient who has had malignant hypertension for at least nine months would not be showing improvement in her condition. Do the age and the circumstances in this case indicate any menopausal element in the aetiology? If so, it would be worth while to try ovarian substitution therapy. There are no known medicaments which can be relied upon to lower blood pressure for more than brief periods. The only operative treatment available for patients found to have no unilateral renal lesion is the extensive sympathectomy advocated by Smithwick. The results to be expected from this operation depend upon the pulse pressure being relatively low. As good results are likely only when the pulse pressure is about half the diastolic pressure this patient would be unlikely to benefit. Treatment in the present case will therefore consist in an appropriate regimen and symptomatic remedies, coupled, if the renal function is at all impaired, by a restriction of protein in the dietary. The prognosis depends upon the age and the cause. The younger the patient the worse the outlook; conversely, if the paient is, say, 50 years of age and at the climacteric the prospect is correspondingly more hopeful.

The Tobacco Habit

Q.—*Is there an effective cure for the tobacco habit? What is the method advocated by advertised "cures"?*

A.—The "tobacco habit" is due to a composite of motives, often opposite ones. The obvious physiological advantage is that by the paralysis of nerve-endings it soothes the organism when in a state of excitation. On the psychological side a youth usually takes to smoking because he feels it to be big and manly, or the girl because it is sophisticated and grown up, a gesture of emancipation. But analysis of these cases proves that there is a more fundamental and opposite motive of smoking, and that is a sucking tendency. Many men, will, therefore, suck their pipes when they have no tobacco, and a straw if they are without a pipe. It is a movement away from life, and a return to infantile life. The cases of chain smoking we have analysed (see *Journal*, 1945, **1**, 793) all reduce themselves to a regression to oral erotic tendencies in infancy, which were arrested in development because of the feeling of lack of love, the sensuous pleasure being resorted to as a substitute for the mother's breast and a solace for the loss of love. The "soothing" qualities of smoking so often ascribed to the effect of nicotine on the nerve-endings is probably more often due to this reversion to an infantile solace.

We have no first-hand knowledge of the use of the advertised cures; but there is no reason why some drug which so affects the tongue and palate that the tobacco is made distasteful should not succeed, just as some men find smoking distasteful when they have a bad "cold." It does not cure the cause, but by breaking a vicious circle for the time being it may enable the victim to overcome it. The same applies to suggestion—a mode of treatment which is unfortunately dying out in the face of the more radical analytic treatment, but which has its very definite uses in psychotherapy.

Respiratory Murmur

Q.—*Can you explain why the respiratory murmur can be heard much better in some normal patients than in others, irrespective of the thickness of the chest wall?*

A.—The cause of the normal respiratory murmur is not exactly known, but it probably consists of two elements: (1) Vibrations produced by the air passing through the glottis; these are transmitted along the bronchial tree and become fainter towards the periphery. (2) Vibrations produced by the air passing from the small terminal bronchioles into the larger air sacs. The position of the vocal cords influences the volume of the respiratory murmur, and so does the depth of respiration. Variations in these two factors, particularly in the depth of breathing, account for the differences in the respiratory murmur in normal individuals. It must also be remembered that emphysema suppresses the respiratory murmur, and that some degree of emphysema is very common, especially in later life.

Specks before the Eyes

Q.—*What is the cause of floating specks before the eyes, and is there any remedy? A patient describes them as "small finger-prints." I believe they are technically called "muscae volitantes."*

A.—Floating specks before the eyes are usually due to a liquefaction of the vitreous and are caused by the conversion of the normal colloid gel into a sol. The cause of this change may be due to physico-chemical factors, enzymic digestion of the protein bases of the gel, or a degeneration as in senile and myopic eyes and after contusion of the globe. There is no real remedy, though a mixture with 2 gr. (0.13 g.) of potassium iodide in it may be given by mouth twice a day for a month or so. Improvement has been reported after such treatment, but may be due to the "specks" having moved to a position where they are no longer noticed by the patient. Proper correction of errors of refraction also tend to make the "specks" less distinct to the patient. Any focus of sepsis should be sought out and dealt with to prevent further possible vitreous changes.

Should Women Wear Corsets?

Q.—*Apart from aesthetic considerations, what are the general and specific indications for wearing corsets? What is the authoritative view on designs and materials, and at what age should children or young women be introduced to the practice? I would also appreciate a note on how far brassières and suspender belts are recommended as articles of wear.*

A.—In my opinion, apart from aesthetic considerations, there are no general and specific indications for the *healthy* female to wear corsets. In later life, and after abdominal operations or repeated childbirth, women often state that the support afforded by a corset is helpful and reduces fatigue. But it seems a pity that so many women become dependent on a corset support when massage and remedial exercises would be of more benefit.

It is well to point out that the modern idea of a "corset" is very different from the old. The modern "foundation garment," if well made, and especially if made to fit the individual for whom it is intended, is comfortable to wear and has no disadvantages of undue pressure or restriction of movement. It is such a help aesthetically in so many cases that it is to be recommended, especially in the late thirties and onwards. Earlier, nothing of this kind should be required, but many

adolescent girls and young women are advised to wear brassières. With the brassière a narrow hip suspender belt can be worn to support stockings if required. Should a corset be thought necessary for younger women the corselette type is often recommended—to be worn over the vest and not next to the skin, and washed frequently.

These matters are discussed in health education courses in schools and colleges, but it is helpful for women school medical officers to have a word with individuals at school medical inspections. More notice is taken of this individual advice than of that given in lectures or classes.

Meulengracht Diet

Q.—*What are the details of the Meulengracht diet for haematemesis?*

A.—Meulengracht in 1934 reported his experiences of "the treatment of haematemesis and melaena with food" (*Acta med. scand.*, 1934, *Suppt.*, **59**, 375). The details of his regimen, which are set out below, are given in his article, and repeated in later papers: *Lancet*, 1935, **2**, 1,220; *Wien. klin. Wschr.*, 1936, **49**, 1,481.

From the day of admission the following diet is taken:

6 a.m. Tea; bread-and-butter.
9 a.m. Oatmeal with milk; bread-and-butter.
1 p.m. Dinner: Main dish (meat or fish balls; *timbale*; broiled chops; omelette; meat, fish, or vegetable *gratiné*; mashed potatoes; vegetable purée), with either soup (vegetable soup or cream of vegetables) or sweet (stewed apricots, apple purée, gruel, rice or tapioca pudding).
3 p.m. Cocoa.
6 p.m. Bread-and-butter; sliced meats; cheese; tea.

Only white bread is served, and milk can be taken between meals if desired. The patient is allowed to eat as much as he wishes, and the average calorie value is about 2,300. An alkaline powder (sod. bicarb. 15 g., mag. subcarb. 15 g., ext. hyoscyami 2 g.; one teaspoonsful t.i.d.) and iron (ferrous lactate 0.5 g. t.i.d.) are administered from the first day. The patient is allowed to move about freely in bed, and usually starts to get up after two or three weeks. The average period in hospital in Meulengracht's patients was five weeks; on discharge they were advised to continue the medicines for six weeks and the diet for six months.

The Meulengracht regimen in its original form has probably not been widely used in this country, although the principle on which it is founded now commands general assent. The excellent modification by Witts is followed in many hospitals; full details can be found in this *Journal* (1937, **1**, 847). Avery Jones (ibid., 1939, **2**, 332) has stressed the importance of an adequate intake of fluid and salt for these patients—a point neglected by Meulengracht.

Syphilis: Criteria of Cure

Q.—*A patient of 56, who was cured of G.P.I. by malaria 20 years ago, now has a normal C.S.F. but the blood W.R. is ++. He is free from symptoms and signs other than fixed pupils and absent knee-jerks. Is further antisyphilitic treatment indicated, and, if so, what?*

A.—No further antisyphilitic treatment is indicated; a normal cerebrospinal fluid so long after apparently successful treatment is the best possible guarantee of arrest of the disease. The positive blood Wassermann may be ignored. See a paper read by Dr. W. D. Nicol and Dr. Maeve Whelen before the Medical Society for the Study of Venereal Diseases, April 27, 1946 (in the press).

Puberty Epimenorrhoea

Q.—*A healthy girl of 18 has her periods at three-weekly intervals, with no increased flow, pain, etc. Is there any known cause for this periodicity, and what modern treatment is recommended?*

A.—There is not necessarily anything wrong with this patient, for a regular cycle of anything between 21 and 35 days is usually regarded as being within normal limits and peculiar to the individual concerned. Nevertheless some degree of epimenorrhoea, clearing up spontaneously a little later in life or after pregnancy, is not uncommon in young girls. Sometimes it is associated with mild hypothyroidism or with pelvic congestion due to sedentary habits, chronic constipation, or sexual excitement. Often, however, there is no obvious cause, and it is assumed to be a mild functional disorder situated primarily in either the pituitary or the ovary. A small regular dose of thyroid is one of the best treatments for puberty epimenorrhoea, but it is doubtful whether any treatment at all is required in this case.

INCOME TAX

"1½ Years' Purchase"—Basis

IGNORAMUS inquires what precisely is the basic figure which is taken in the case of the sale of a practice at "1½ years' purchase"?

*** In general parlance the phrase implies 1½ times the *gross receipts* of the practice. For example, if the gross receipts have been £2,400, the expenses £900, and tax has been paid on the balance of profit (£1,500) to the amount of £600, "1½ years' purchase" would mean 1½ times £2,400—i.e., £3,600.

Increased Share in Practice

A. M.'s share was increased from 1/3 to 1/2 as from April, 1945. On what basis should he pay tax for 1945–6?

*** The practice is assessed as a unit on the basis of the profits for the previous year, but that assessment is divisible between the partners according to their shares for the actual year. In A. M.'s case he is liable to account for tax on one half of the assessment for 1945–6.

Purchase of Share in Practice

J. W. purchased a third share in a practice as from March 1, 1946. How should the tax assessed for the year to April 5, 1946, be divided between himself and the out-going vendor of the share?

*** J. W. will be liable to account for tax on one third of 36/365 of the gross assessment on the practice. He can, however, deduct therefrom any allowances or reliefs due to him for 1945–6 and not allowed from any other item of his income.

"A practitioner starting in a practice" cannot claim the "cash basis" concession; but as the practice is the unit to be assessed, and is presumably not being treated as "new," the question does not arise in J. W.'s case.

First Year of Assistantship

B. H. is about to commence as an assistant in general practice at a salary of £*x* a year, and will have to find and run his own car and rent a flat. The practice is carried on at a central surgery.

*** He will be able to claim the "initial" and depreciation allowances on the car, and the cost of upkeep of (but not the original outlay on) such instruments, etc., as his service agreement requires him to provide. As regards the rent of the flat and such general expenses as telephone, domestic service, wages, etc., he can claim to deduct the additional expense attributable to professional use, but on that basis he is not likely to obtain a substantial deduction.

War Damage Contribution

J. owns the freehold of a house which has been requisitioned by the Ministry of Health and converted into flats. As a result, the assessment on which War Damage contribution is payable has been increased from £40 to £120. The amount of compensation received for the requisitioning of the property is £90 per annum. Is J. liable to pay the increased contribution?

*** Yes. The liability attaches to the direct contributor, i.e., the person who has a proprietary interest subsisting in the property, and J. apparently owns that interest. War Damage contributions turn on ownership, not on the way in which in any particular year the income from the property is shared. There are exceptions to this rule. Where there are tenancy rights extending over a period of years, the direct contributor can claim a partial indemnity from his tenant, but on the facts quoted this does not assist J.

Non-resident Appointment: Car Expenses

F. asks whether the cost of running a car between his residence and a hospital, at which he holds a whole-time non-resident post, can be deducted for income tax purposes?

*** No. The rule is strictly construed, and the expense of travelling between the residence and the place where the duties of an appointment are performed is not regarded as incurred *in* the performance of those duties.

Absence Abroad: War Loan Interest: Car Transactions

T. F. was abroad in the Army from Jan., 1941, to Jan., 1945; and from Jan., 1941, to Aug., 1943, his wife was domiciled in Northern Ireland, his house being let furnished. Can he claim exemption on War Loan Interest?

*** On the facts stated it would seem that T. F. was "domiciled" and "ordinarily resident" in the United Kingdom, and therefore is liable to tax on the War Loan Interest.

Claims can be made for the "initial allowance" and "depreciation allowance" on both cars bought by T. F. since demobilization. The claims for the car bought in Jan., 1946, will be for the financial year for which tax is assessed on the profits made in the period which includes April 6, 1946; the claims for the car bought on May 16, 1946, will be for the financial year for which tax is assessed on the profits of the period including that date.

Car Transactions

G. H. bought a car for £350 in 1938 while in practice. He sold his partnership share in March, 1940, stored the car, and joined the R.A.M.C. He was released in Feb., 1946, and re-commences practice in Aug. or Sept. The present estimated value of the car is £650. Will the future depreciation allowance on the car be based on its cost (£350) less the allowances given so far, or can the value be substituted in calculating the allowance? If the former, may it not be advisable to sell the present car before recommencing practice?

*** The depreciation allowance is intended to give relief in respect of the wastage of capital sunk in buying the car, and the capital amount on which the allowance is calculated will therefore be based on the amount expended and not on any estimate of present value. From an income tax point of view it would seem advisable for G. H. to sell his present car before recommencing practice, but obviously other factors enter into his decision. For instance, if he holds the car for another year or so both the "balancing charge" and the cost of a new car might be materially less than at present.

A. R. bought car "A" in 1938 for £205, was called up in Aug., 1939, and sold the car for £145 in July, 1942. At the same time he bought car "R" for £320. He resumed practice on Oct. 1, 1945. (*a*) What, if anything, can he claim in respect of the transactions, and (*b*) what allowance can he claim for the period after Oct. 1, 1945?

*** (*a*) As the sale and purchase took place during the discontinuance of the source of income to be assessed, there appears to be no basis for any claim to a deduction for the money then spent.

(*b*) Depreciation allowance can be claimed on car "R," for the half year from Oct., 1945, at 20% plus one-fifth, i.e., 24% per annum, and for the year 1946–7 at 25%. With regard to the capital basis, A. R. cannot put it higher than £320, the actual cost of the car—the income tax authorities may claim to put it at £320 less the national wear-and-tear allowance for the period from the date of purchase to Oct. 1, 1945.

G. P. (*a*) bought a car in 1935 for £140 and sold it in March, 1946, for £100, the written-down value then being £8. Is a "balancing charge" due? And (*b*) bought a car in March, 1946, for £371. Can he claim an "initial allowance" for 1946–7?

*** (*a*) No—the car having been sold before April 6, 1946; (*b*) the car must be regarded as having been acquired on April 6, 1946, the first day of 1946–7, and accordingly the initial allowance is due for 1947–8, not 1946–7.

C. R., referring to the reply to "Equity" (July 13, p. 76), asks what is the effect of a "balancing charge"?

*** Tax is payable on the amount of the charge, ordinarily as part of the professional profits, at the rate of tax appropriate to the vendor of the car for the year of liability.

Military Pay: Deduction for Cost of Books, etc.

C. R. asks, "What relief can medical specialists in a military service claim in respect of medical journals and books, subscriptions to learned societies, and home telephone which the service require all specialists to have installed in their homes?"

*** The matter is governed by the Schedule E rule which forbids the deduction of expenses unless they are incurred "wholly, exclusively, and necessarily in the performance of the duties of the office." The rule is interpreted by the revenue authorities as forbidding the deduction of the sort of expenses indicated unless they are required to be incurred by the terms of the service agreement. C. R. seems to have some claim for the use of his telephone; the position with regard to the other expenses is more doubtful. An appeal can be made to the Income Tax Commissioners for the employing department, and an appeal to the High Court can be lodged against their decision.

LETTERS, NOTES, ETC.

Sites for Intramuscular Injection

Dr. J. E. O'N. GILLESPIE (Dublin) writes: In the reply to a query on sites for intramuscular injection (July 27, p. 147) it is stated that "experience shows the safe area of the buttock to be far and away the best site in the body for intramuscular injection." I think that the lateral aspect of the thigh is, in general, by far and away the best site for intramuscular injection and that the use of this site should always be taught to medical students and nurses. As your respondent points out, injection can be given there without danger; but he adds that it is usually more painful than if given in the buttock. I doubt if this be so, although I cannot produce evidence to support my view. The risk of injury to the sciatic nerve when the injection is given in the buttock is real, although obviously it implies lack of knowledge on the part of doctor or nurse.

Effects of Sweets on Teeth

Miss MARY THOMAS (Oxford) writes: I have been interested in the correspondence on the effect of sweets on teeth because my grandmother, who was born about 1854 and died at the age of 76, had a fixed habit of always eating a small piece of chocolate the last thing at night after getting into bed, and had the most perfect teeth throughout her life of anyone I have known. As a matter of routine she went periodically to the dentist, but was never given any treatment as she never needed any. This unusual degree of dental health was not transmitted to any of her seven children or her eleven grandchildren, all of whom have quite ordinary troublesome teeth. It is possible that this may be due to dietetic causes. When my grandmother was a child crops were still grown by wholly organic farming methods, and it is contended by many modern authorities that the food produced in this way has more vitality, and gives those who eat it greater resistance to disease, than food grown with artificial, chemical fertilizers, as has for many years now been accepted farming practice. Nutritionists would find the recently published *Humus—and the Farmer*, by Friend Sykes, of absorbing interest in this connexion, since he gives the results of his own experiments in organic food production, over many years, upon the health of plants, farm animals fed on such food, and on his own health. Among other things he says that the formation of tartar on his teeth ceased completely after eating whole-wheat bread made from grain produced on his farm by organic methods only, for two or three years. He considers that by organic methods of farming—i.e., use of natural manures—a correct rotation of crops and leys, and proper tilling of the soil England could easily produce enough food to feed the whole of her population, and that such food would be of a much higher quality than we eat now.

R.A.M.C. Reunion Dinners

Mr. T. J. DALY (1, Lancashire Road, Bishopston, Bristol) writes: In various sections of the press one reads of reunion dinners and meetings being planned or suggested. Due to the exigencies of war, very few Army medical officers could lay claim to any one parent unit. Changes of locality, units, and personnel were experienced quite often by the vast majority. The object of this letter is to effect the formation of an association to enable ex-Forces medicos to perpetuate the comradeship and brotherhood fostered during war service. It would not be the intention to hold one reunion dinner, say, in London, where only the fortunate ones can assemble, but to arrange such affairs in regional centres throughout the land. Should any of your readers be interested in this suggestion, I will gladly furnish fuller particulars of a tentative scheme to launch this idea.

In Aid of the Grenfell Mission

Though the claims upon the charity of doctors are as numerous as they have ever been, we would nevertheless draw their attention to an organization particularly deserving of their sympathy and generosity. The Grenfell Mission continues its work of healing, education, and welfare among the poor of Newfoundland and Labrador; its hospitals and nursing stations in remote places are the sole means of bringing help in time of distress to the people, and its schools provide the only education to be had by children in isolated settlements. It needs funds urgently. Doctors can help by purchasing their Christmas cards from the Grenfell Association in this country. This year a number of attractive cards in colour are available at 10d. each, and in black and white at 5d. each; a pocket calendar at 7d.; coloured postcards in packets of 6 for 2s., and sepia postcards at 2d. each. For philatelists there are packets of Dominion, Colonial, and U.S.A. stamps, 24 per packet at 1s. 6d. They should be obtained from the Grenfell Association, 66, Victoria Street, London, S.W.1, or from Miss Howat, c/o Maclay and M'Intyre, Ltd., 125, Buchanan Street, Glasgow, C.1.